CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Santa Clara Valley Water District

TO: HONORABLE MAYOR, BOARD CHAIR, CITY COUNCILMEMBERS
BOARD MEMBERS

FROM: DAVID SYKES, City Manager, City of San Jose
NORMA CAMACHO, Chief Executive Officer, Santa Clara Valley Water District

SUBJECT: JOINT EMERGENCY ACTION PLAN AND RELATED WORK

DATE: October 30, 2017

RECOMMENDATION

A. Adopt a City of San José (City) Resolution and a Santa Clara Valley Water District (District) Resolution approving the newly developed Joint Emergency Action Plan (EAP) which designates approval of future revisions to the City Manager and District Chief Executive Officer.

B. Adopt the legislative recommendations in Section 5. Legislative Analysis.

C. Accept this memorandum as a status report on key issues that require ongoing close collaboration between the City and the District to improve flood response readiness.

OUTCOME

By adopting the Joint EAP both agencies agree to:

- Collaborate on flood preparedness, response, and mitigation activities;
- Cooperate, operate, and staff a Multi-Agency Coordination (MAC) Group, before, during, and after a flood emergency; and
- Train and exercise on the Joint EAP on an annual basis.

EXECUTIVE SUMMARY

The EAP embodies three principles that will result in improvements to City-District coordination on potential flooding along waterways in San José. Guided by the EAP, the two agencies will:

1. **Work together as a single entity when flooding is predicted, imminent or occurring.** The creation of the EAP by six Work Groups comprised of staff from both agencies establishes a firm basis for the MAC concept in preparing for and responding to future flood events.
2. **Concur on definitions and a shared set of determining factors for analyzing flood conditions.** The EAP aligns with definitions and language used by the National Weather Service; maps an expanded number of gauges and flood-level indicators at critical locations in streams; and is the impetus to gis.valleywater.org/SCVWDFloodWatch/, a new, public

website that provides live situational information on water levels in Coyote Creek and Anderson Reservoir.

3. **Subscribe to graduated operational levels that direct decision-making, action planning and public communications.** Staff established operational levels for flood conditions on Coyote Creek that are keyed to four stages of flood threat (preparedness-monitoring-watch-warning); these align with levels of alert used by National Weather Service. Depending on available flood stage modeling information, these conditions and flooding severity may be more clearly identified to specific locations along the creek.

The operational and mobilization elements of the EAP provide guidelines to the appropriate managers and functional departments of both agencies for joint decision-making and mobilization of resources during all four levels of flood threat.

The EAP also outlines roles and responsibilities on public communications and emergency notification. Multilingual messages, methods for communicating, and channels of communication are now pre-determined and in accordance with flood condition and operational levels.

This EAP will provide oversight and guidance. It is not intended to provide ultra-detailed directives of what to do during storms and flood monitoring and response, as the City and District have independent responsibility with limited resources to accomplish their tasks.

BACKGROUND

The San José City Council (Council) and Santa Clara Valley Water District Board of Directors (Board) met on April 28, 2017 to discuss how to improve decision-making, coordination and communications during flood events. The two elected bodies unanimously approved development of a joint EAP. With staff of both jurisdictions participating, the EAP was developed by a Management Team that organized staff within six Work Groups to prepare the components of the EAP, as well as to plan and implement other actions to mitigate flood concerns. These Work Groups included:

1. Emergency Action Plan (EAP)
2. Technical
3. Communications
4. Creek Management
5. Short-Term Projects
6. Action Planning

Mirroring a successful program created by the San Francisquito Creek Multi-Agency Coordination (MAC) and Operational Plan, in May 2017 the Work Groups and team managers began to meet monthly. The result of these meetings is reflected in the EAP and related activities. This memo provides information and analysis of the work accomplished by each of the Work Groups as follows:

1. EMERGENCY ACTION PLAN (EAP) ANALYSIS

The EAP and Action Planning Work Groups combined efforts on interagency response actions, which developed a plan that is organized, functional, and meets the objectives of official directives. The EAP is designed to provide general guidance for the City, District, and other stakeholders to facilitate:

1. Pre-incident planning prior to a storm or flood event;
2. Coordination of interagency response during an incident and recovery operation; and
3. Effective, coordinated public messaging for potential, imminent, and actual flooding.

The EAP is activated throughout the year, regardless of conditions. When flooding is not a concern, stakeholders focus on preparedness, which largely entails activities that reduce the risk of flooding and preparedness education in the community. During this period, stakeholders perform such activities as consistent with their jurisdictional responsibilities. When flooding becomes a concern, the EAP provides guidance based on two proven, operationalized programs: Multi-Agency Coordination (MAC) Group and Flood Condition Levels.

Multi-Agency Coordination (MAC) Group. City and District staff agree that operating under the structure of a MAC Group will improve coordinated decision-making, operational response, and communications. As stated in the *California Statewide Multi-Agency Coordination System Guide*:

> "A Multi-Agency Coordination Group may be convened by an EOC Director ... to establish priorities among multiple competing incidents, provide coordinated decision-making for resource allocation among cooperating agencies, harmonize agency policies, and offer strategic guidance and direction to support incident management activities. MAC Groups convene to prioritize incidents for the allocation of scarce resources. Group members should consist of administrators or executives, or their designees, who are authorized to commit agency resources and funds."[1]

Concepts and activities outlined in the EAP are associated with the level of storm or flood threat. To maintain the collaborative nature of a MAC, this EAP is considered active 24/7. The principles and actions of a MAC are integrated at all levels. The intensity and degree of activity will increase or decrease in response to stream and creek conditions.

Flood Condition Levels. Flood condition levels align with these four definitions used by the National Weather Service:

1. **Preparedness (Green)** – Stream depth is below 50% of flood stage. Flooding is not expected within the next 72 hours.
2. **Monitoring (Yellow)** - Stream depth is between 50% and 70% of flood stage. Flooding could possibly be reached in 72 hours or more.

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[1] *California Statewide Multi-Agency Coordination System Guide* (Rev. Feb. 2013)

3. **Watch (Orange)** - Stream depth is between 70% and 100% of flood stage. Flooding could be reached within 24 to 72 hours.
4. **Warning (Red)** – Stream depth is very close to or at flood stage. This is an urgent situation. Flooding is estimated to occur within 24 hours or is occurring.

Staff determine flood condition levels by using information from the following sources:

- Weather forecasts
- The District's Automated Local Evaluation in Real Time (ALERT) Gauge System, providing data readings at http://alert.valleywater.org/sgi.php.
- Hydrologic/Hydraulic Modeling
- Observations by field teams

2. TECHNICAL ANALYSIS

The Technical Work Group focused on improving data methodologies so that information provided to the MAC Group would enable a better understanding of flood risk and allow it to be communicated in a more timely manner. This team's work included:

1. **Updating models.** Using data from the February 2017 flood event, District staff updated their Coyote Creek hydraulic model, while City staff updated their storm drain system model. From these updated models, staff created stage-based flood inundation maps that include both the creek and storm drain flooding information for reference during future flood events.

2. **Actions on stream gauges.** Stream gauges are a key source of predictive information for flooding. District staff took the following actions regarding stream gauges:

   - **Madrone gauge becomes key forecast point**. To enable a greater window of time to take action and enhance reliability of flood stage data, District staff coordinated with the National Weather Service to move the flood forecast point for Coyote Creek further upstream to the Madrone stream gauge.
   - **Six new gauges**. District staff installed a new flood stage gauge on the Berryessa Road bridge over Coyote Creek, and installed five new visual stage gauges at the following locations: Rock Springs Drive, East William Street (pedestrian bridge), Mabury Road, Berryessa Road, and Charcot Avenue. For understanding by the public, the gauges present the flood condition level in foot increments, not cubic feet per second. Both staff and the public can view and assess water levels at these visual gauges, which are mapped at gis.valleywater.org/SCVWDFloodWatch/; see also *Attachment 1-Joint Emergency Action Plan handout* for a photo of a visible gauge.
   - **Flood severity level data developed for gauges**. District staff also developed flood severity for each stream gauge to summarize potential damages at different stages.

3. **Deployment of field information teams**. In addition to monitoring reservoir and stream gauge readings, both agencies will deploy field information teams (FITs) to observe conditions in creek corridors. FIT staff will use the above-mentioned stage gauges as index points.

3. COMMUNICATIONS ANALYSIS

The Communications Work Group, comprised of communications managers from the District and City, undertook tasks to both clarify their public information roles during a flood emergency; promote the new EAP while also working to educate the public on winter storm readiness; and improve the public notification process for flood emergencies. Several of the EAP Work Groups collaborated on the information provided at the three resource fairs. Other Work Group efforts that have a public preparedness component are the five new visual stage gauges that residents can view, and the new website on creek water levels: gis.valleywater.org/SCVWDFloodWatch/

Clarified Roles. The EAP outlines roles of District and City PIOs during a flood event, and directs them to follow checklists and implement various responsibilities as identified in each jurisdiction's Emergency Operations Plan (EOP). This EAP does not change or override tasks outlined in those plans; rather, the goal is to coordinate so the public experiences clear, unified messaging.

Apprising Elected Officials. The EAP identifies that each agency's PIO or Liaison staff will inform elected officials of evolving flood conditions during the monitoring-watch-warning stages and provide appropriate public messaging. The EAP instructs officials that if they are in contact with affected constituents and receive pertinent information, they are to convey that information to the MAC through PIO or Liaison staff. See the EAP document, Attachment 7 for an Elected Officials Emergency Action List.

Winter Storm Resource Fairs. The team planned and promoted three Winter Storm Resource Fairs, held on October 18, 19 and 28. While open to the general public, the fairs targeted the neighborhoods impacted by the February 2017 floods. Staff will provide a verbal report on attendance and other outcomes of the fairs that had not fully concluded at the time of finalizing this memorandum.

Improved Notification Process. In association with the fairs, staff developed a set of clear, multilingual messages aligned with the four flood threat levels; see *Attachment 2-Flood Emergency Messages*. Additionally, staff used the fairs to present a poster of 14 methods of emergency message dissemination, and engaged attendees on their preferred top three methods (outcomes to be discussed in verbal report). The EAP document includes these messages and channels of communication.

4. CREEK MANAGEMENT ANALYSIS

The Creek Management Work Group identified existing creek management projects as well as new short-term creek maintenance and management activities in and along Coyote Creek.

Existing creek maintenance program. In 1996, the District completed flood protection improvements designed to convey a 100-year flood on Coyote Creek from north of Montague Expressway to the Bay. The District maintains the functionality of these improvements to ensure this significant investment in infrastructure continues to provide the flow capacity, structural integrity and environmental benefits as designed. This work takes place on lands where the District has secured property rights and is performed under a 10-year Stream Maintenance Program (SMP), approved in

2013 by seven state and federal regulatory agencies. To the south of Montague Expressway (upstream), the creek is generally a natural, unmodified channel. Here, the SMP limits creek management activities to those that do not significantly alter existing conditions. Such activities include removing fallen and hazardous trees and invasive plants, habitat restoration, erosion repair, weed abatement for fire suppression, and homeless encampment cleanups.

New short-term creek management projects. Following the February 2017 storms and flooding, City and District staff completed or are performing a variety of short-term projects. Staff focused on projects that address the most impactful areas of debris accumulation, and both agencies contributed to related costs. Projects include:

1. Reconstruction of a levee south of the South Bay Mobile Home park.
2. Removal of 13 acres of invasive vegetation at six sites between Old Oakland Road and Tully Road on District property and easement on City land.
3. Negotiated a right of entry to allow District access to remove invasive vegetation. Removed invasive plants along the west bank on City property south of Old Oakland Road.
4. Removed fallen tree channel obstructions at 13 locations on District property (fee) and District easements held on City land and on private property.
5. Negotiated a right of entry and cost reimbursement agreement for District access to remove fallen tree channel obstructions on City property. Removal work began October 23, 2017.
6. Construction of temporary berm and installation of the sheet pile wall at Rock Springs.
7. Conducted multiple encampment cleanups between Tasman and Tully to remove trash.
8. Drafted an operating procedure for joint management of sandbags and identified additional sites to stock as needed.

5. SHORT-TERM PROJECT ANALYSIS

The Short-Term Projects Work Group focused on feasible projects that could reduce the risk of flooding to the community. This work reflected direction from the District Board, as after the February 2017 flooding, the Board directed staff to look for short- and long-term ideas to reduce the risk of flooding in the community. On June 13, the Board conducted a public hearing to modify the Safe, Clean Water and Natural Flood Protection Program project for Coyote Creek, extending the project upstream to cover the Rock Springs neighborhood and allowing the development of less than 100-year flood protection as an interim measure. District staff updated the creek models using calibration from the recent flood and analyzed two categories of options to provide short-term flood risk reduction: flood barrier options and reservoir operations options.

Flood Barrier Options / Temporary Barrier at Rock Springs Is Underway. Flood barriers increase channel capacity through elevating banks or walling off vulnerable areas from flood flows. Flood barriers must not increase flooding elsewhere and must be quickly permittable and constructible. The main flood breakout areas (Rock Springs, Selma Olinder and Williams, and the Mobile Home Parks) were analyzed for feasibility of flood barrier installations. Rock Springs was the only site that proved feasible. After considering a variety of construction alternatives, staff recommended:

1. A 500-foot long earthen berm up to 5 feet tall installed across San Jose Water Company (SJWC) property to the end of Bevin Brook Drive.
2. A 400-foot long vinyl sheet pile wall up to 3 feet tall installed across the SJWC access driveway and City of San José park areas.

The Board approved the recommended project on August 22, 2017; staff completed design, environmental review, and plans and held a community meeting on September 20, 2017; the Board then approved the project on September 26. Project construction began the following week and is anticipated to be completed by end of the year.

Reservoir Operations Options / Operating Anderson Reservoir at Reduced Levels Approved. Reservoir operation options evaluated include the use of pumps and reservoir storage techniques to reduce the risk of floods downstream. While there may be other options available once Anderson Dam has been rebuilt, for now, two basic options were identified:

1. Installing pumps in the reservoir to increase releases of stored water and provide more storage volume for future runoff; and
2. Lowering the reservoir storage level significantly below the current restriction before the winter season to provide more storage capacity (with no pumps).

These two options were evaluated on their flood peak reduction effectiveness under three scenarios: a dry year, an average year, and the peak spill 2017 water year. The results were presented to the District's Coyote Creek Flood Risk Reduction Ad Hoc Committee on August 31, 2017. While both options proved able to reduce or eliminate the peak spill under the 2017 water year scenario, each has significant caveats: The pumping option is expensive and requires a lengthy permitting timeline. The reduced storage option could have significant impacts to water resource reliability. The options were evaluated further in September and the conclusion was reported back to the Ad Hoc Committee on October 5 as follows:

- Based on modeling, a pump-over system could significantly reduce the occurrence and magnitude of spillway discharges in very wet years. If approved, a pump-over system would cost between $4 million and $5 million annually. It would likely take four to five years to conduct the design, environmental clearance, and permit process to install such a system.

- Operating Anderson Reservoir at reduced storage levels via the existing outlet pipe would significantly reduce the probability and magnitude of spillway discharges in very wet years. However, water supply reliability may be compromised in years of average or low rainfall.

The Ad Hoc Committee forwarded their final recommendation to the District Board for consideration at their October 10 meeting. The recommended action was to provide direction to staff to operate the Anderson Reservoir system through the winter of 2017/2018 following the 40% exceedance rule curve to reduce the risk of flooding along Coyote Creek and provide adequate water supply while balancing other beneficial uses. The Board also directed staff to report back with a similar analysis and an appropriate recommendation for Board decision annually for the few years remaining until Anderson Dam construction begins.

6. LEGISLATIVE ANALYSIS

Securing adequate funding, authorization, and permits for flood protection projects is notoriously difficult and requires robust advocacy efforts at the federal and state levels to move projects forward to completion. The District vigorously pursues these advocacy efforts year-round by meeting with federal, state and regulatory officials to advocate for funding, authorization, and permits for these projects. The City similarly advocates for flood protection efforts by taking positions on flood-related bills and providing testimony at hearings, often in conjunction with the District.

Federal Legislative Options

Shortly after the February flood, the District made flood protection efforts along Coyote Creek a top priority for the Spring Washington DC Advocacy Trip. During that trip, the District met with the US Army Corps of Engineers (Corps) to identify potential paths for funding Coyote Creek flood protection efforts.

Due to these meetings, the District requested that the Corps implement Section 1126 of the Water Infrastructure Improvement for the Nation Act, which the District had strongly advocated for during the congressional session. This section would allow the District to pay for and complete a feasibility study for a potential flood protection project along Coyote Creek. Ordinarily, the Corps would complete a feasibility study for any potential flood protection project—which is subject to the Corps having the time and money to do so. Section 1126 allows the District to jump-start that process and instead complete the feasibility study themselves, substantially expediting this process.

In October, the District completed a Memorandum of Agreement with the Corps for the Section 1126, and the feasibility study is expected to begin soon. Once completed, the District will work with the Corps on project options identified in the study, and may need to pursue authorization and funding for a preferred project, through both the Administration's budget and the Corps Work Plan and Budget, among other avenues. At that point, it behooves the District and City to work together and it is recommended that the City Council and District Board:

1. Adopt as a legislative priority support for federal legislative, administrative, and regulatory efforts to secure funding, authorization, and permits for flood protection efforts along Coyote Creek; and
2. Direct City and District staff to work together toward this end on advocacy efforts including letters of support on bills and/or rulemaking actions, advocacy with federal elected officials and regulatory agency officials, and other actions.

State Legislative Options

Pursuing state legislation to provide resources for flood protection is common and often successful. Examples include Assembly Bill 646 by Assembly member Ash Kalra (supported by both the District and City), which recently passed and now requires landlords to disclose to their tenants that their rental property is in a natural hazard area, including a floodplain, if the landlord has "actual knowledge" of that information. Similarly successful, Senate Bill 5, the $4 billion Parks and Water Bond, was recently signed and will appear on the June 2018 ballot. It contains several funding

opportunities for flood protection efforts and habitat restoration—these efforts are part of flood protection project permitting, so funding for them is key. The District and the City both supported various provisions within SB 5.

State legislation also can address key process improvements that can help speed the implementation of flood protection projects, such as expedited permitting. Long permit processing times; lack of adequate permit agency staffing; and conflicting mitigation requirements are just a few issues that can challenge these large projects. Current law allows authorities to take quick action in response to dire emergencies by exempting or delaying regulatory permitting, but some high priority projects to protect human life and safety, such as flood protection along Coyote Creek, do not rise to the level of a defined "emergency" of clear and imminent danger.

To address this, earlier this year the District pursued a bill to expedite the regulatory permitting process. District staff worked closely with Senator Jim Beall, who agreed to author and introduce SB 594, which would expedite the state permit process for flood protection projects that meet key criteria regarding human life safety improvements. Projects would still be required to complete a CEQA review. A flood protection project on Coyote Creek would qualify under the criteria that states, "The project is located in a watershed that has experienced flooding within the last 10 years that resulted in cumulative losses exceeding $50 million, and flood risk reduction and storm water capture are multi-benefit outcomes of the project."

Given the significant role that permitting plays in the process to build a flood protection project, it is recommended that the City Council and District Board:

1. Adopt as a legislative priority support for federal and state efforts to expedite and/or streamline permitting for flood protection projects;
2. Adopt a position of support on SB 594;
3. Work collaboratively at the state level to expedite permitting for these projects, and
4. Direct City and District staff to work together on state-level advocacy efforts in support of this legislative priority.

Budget Options

Another avenue to securing funding is working through the state budget process. Our area's Delegation obtained the state legislature's and Governor's approval earlier this year of $5.4 million in budget appropriations to aid residents of San José who were displaced by the flooding, with aid taking the form of vouchers for rent, acquisition of vehicles, and case management. Both the City and District supported that budget request. In addition, the District vigorously advocates for increased funding for both flood protection in general, and subvention funding specifically, through the state budget process.

Under state law, three categories of projects qualify for state subventions funding: Major Flood Protection Projects, Small Flood Protection Projects, and Watershed Protection Projects. The Flood Protection Corridors Program was created in 1945 to pay for the state cost of rights of way and relocation costs of channel improvement and levee projects. The Program provides financial

assistance to local agencies, like the District, that are cooperating with the Corps on federally authorized flood projection projects.

The continued funding of the state subventions program ensures that the District's expenditures for the acquisition of properties related to federally authorized projects are reimbursed, and the District has taken advantage of this significant source of funding with success on other projects. The District would seek to do the same if/when a flood protection project on Coyote Creek is authorized. However, subventions funding historically has been largely directed toward Central Valley flood protection programs. Consequently, the District advocates during the budget process for increased funding of the program in areas outside the Central Valley, which could directly benefit a project such as one that could be built on Coyote Creek. To that end, it is recommended that the City Council and District Board:

1. Adopt as a legislative priority support for state legislative, administrative, and regulatory efforts to secure funding, authorization, and permits for flood protection efforts along Coyote Creek, and
2. Direct City and District staff to work together toward this end on advocacy efforts including, but not limited to, letters of support on specific bills, advocacy with state elected officials and regulatory agency officials, and other actions.

Federal and state funding and permitting are both significant hurdles for any flood protection project, but by working together at both the federal and state levels, the City and the District have an improved chance of advancing flood protection efforts along Coyote Creek.

EVALUATION AND FOLLOW-UP

The EAP went through individual agency review, a joint Tabletop Exercise (TTX), and presentation to the public on the methods of how the City and District would provide public information. On an annual basis the EAP will be reviewed, exercised, and updated. The City of San José Office of Emergency Management will maintain the plan and provide updates as needed.

POLICY ALTERNATIVES

***Alternative #1**: Do not adopt the Joint Emergency Action Plan*

Pros: None

Cons: Failure to adopt a joint emergency action plan will hinder effective emergency response and communications between the City and the District during the winter storm season, or in any flooding event.
Reason for not recommending this Alternative: Additional planning and coordination between the two agencies is necessary.

PUBLIC OUTREACH

Public "Winter Storm Resource Fairs" were organized to provide flood preparation information, to encourage enrolling in ALERTSCC, and to gain feedback on methods of information dissemination. The fairs were held:

- October 18, 2017: Golden Wheel Mobile Home Park, 6:00-9:00 p.m., 900 Golden Wheel Park Drive.
- October 19, 2017: Franklin-McKinley School District, 6:00-9:00 p.m., 645 Wool Creek Drive.
- October 28, 2017: Emergency Action Plan Resource Fair @ Martin Luther King Library, 1:00-4:00 p.m., 150 E. San Fernando Street.

COORDINATION

The development of this memorandum has been coordinated with the Santa Clara Valley Water District, City Attorney's Office, and relevant City Departments.

CEQA

Exempt, Not a Project. General Procedure & Policy Making: PP17-008.

For questions, please contact Raymond Riordan, City of San José Director of Emergency Management at (408) 794-7050 or Melanie Richardson, Santa Clara Valley Water District Interim Chief Operating Officer-Watersheds at (408) 630-2821.

Attachment 1: Joint Emergency Action Plan Handout
Attachment 2: Prepare for Winter Storms
Attachment 3: Flood Emergency Messages
Attachment 4: City of San José Resolution to Adopt the Joint Emergency Action Plan
Attachment 5: Santa Clara Valley Water District Resolution to Adopt the Joint Emergency Action Plan
Attachment 6: Joint Emergency Action Plan

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Joint Emergency Action Plan for Severe Storm & Flood Response

What is the Joint Emergency Action Plan?

The City of San José and the Santa Clara Valley Water District have created a Joint Emergency Action Plan (EAP) for severe storms and flood response. The plan outlines how the City and District manage, prepare for and communicate about flooding issues on Coyote Creek as well as other waterways where flooding might occur.

Here are three elements of the plan that are of public interest:

1

We have improved how we measure water levels in Coyote Creek.

You can see gauges near your neighborhood and monitor water levels at a new website.



The District installed more gauges on Coyote Creek. The gauges are painted or attached to bridges, or are free-standing stakes with markings that show the height of the water at that location.

- At ***gis.valleywater.org/SCVWDFloodWatch/***, there is a chart for each gauge location that shows the levels associated with a Monitor, Watch, or Warning status.
- We will use measurements and field observations at these locations, as well as model predictions, to predict the likelihood of flooding.
- You can look at the stream gauge in your neighborhood to assess the water level yourself. Or visit ***gis.valleywater.org/SCVWDFloodWatch/*** to see a map of the locations of gauges and the water levels in both Anderson Reservoir and Coyote Creek and inflow into Coyote Reservoir.

2

We will communicate every stage of a potential flood using improved data analysis.

District staff improved the analytics to help decision makers and the public understand potential and/or imminent flooding conditions.

- Our preparedness levels match those used by the National Weather Service for specific levels of flood threat.
- Public communications will include current status level.
- See our Public Notification Handout on the appropriate actions to take for each status level.

Preparedness	No storms are forecast within the next 72 hours. Stream depths are below 50% of flood stage. Reservoirs are not spilling.
Flood Monitoring	Storms are forecasted. Stream depths are at 50% to 70% of flood stage. This condition is fluctuating and requires monitoring and being alert for potential flooding and possible evacuation notification.
Flood Watch	Storms have occurred. Stream depths may reach flood stage in 24 to 72 hours. Prepare for possible evacuation notice.
Flood Warning	Flooding is imminent, generally within 24 hours or is occurring.

3

We will communicate more effectively with you and the community using better tools and improved procedures.

ALERTSCC
SANTA CLARA COUNTY EMERGENCY ALERT SYSTEM

LRAD
Mobile Mass Notification System



DISTRICT COMMUNICATIONS

As the flood management agency in Santa Clara County, the District (at ***www.valleywater.org/floodready/***) will communicate:

- Flood preparedness.
- Sandbag locations and instructions.
- Water levels in reservoirs and creeks.
- Status of flood improvement projects.

CITY COMMUNICATIONS

The City is responsible for emergency notifications to San José residents, and has trilingual messages that are ready to send for Flood Monitoring, Flood Watch, and Flood Warning conditions. Methods for communicating include:

- AlertSCC, which reaches all landline phones and subscribers who enroll their mobile phones.
- WEA (Wireless Emergency Alerts), which reaches mobile devices in geographically targeted areas.
- Warnings announced through powerful sound systems driven through the affected areas.
- Coordination with radio and TV news outlets.
- Social media such as NextDoor, Twitter and Facebook.
- Flyers and door-to-door alerts as possible.
- Street signage as possible.

Actions to reduce the flood risk of Coyote Creek



Rendering of new flood wall in Rock Springs.

Staff surveyed the creek to analyze why flooding was so severe in 2017. For the coming winter, the City and District are working on near-term projects that can reduce the flood risk of the creek:

- Removing fallen trees and invasive vegetation.
- Construction of a temporary berm and vinyl sheet pile wall near Rock Springs.
- Reinforcement of an earthen levee near mobile home parks.
- Installation of large trash capture device and flap gate on stormwater outfall in Rock Springs.
- Modified operation of Anderson and Coyote reservoirs to reduce winter storage and potential for large spills into Coyote Creek.

Some additional improvements are long-term and will require substantial funding.

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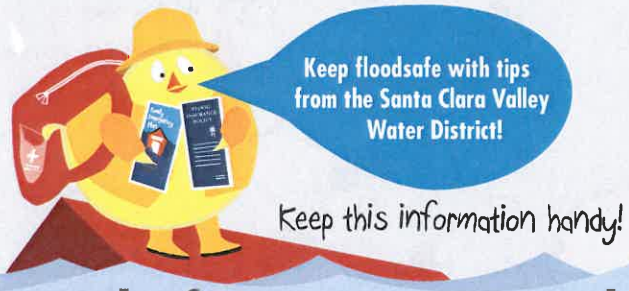
Prepare for Winter Storms

Are you flood safe? Santa Clara County has had several damaging floods over the years. It is important that you make the necessary plans to protect your family and property from flooding. Most homeowner's and renters insurance do not cover flood damage; and typically there is a 30-day waiting period for a policy to go into effect.

Floodwater can flow swiftly through neighborhoods and away from streams when creeks "overbank" or flood. Dangerously fast-moving floodwaters can flow thousands of feet away from the flooded creek within minutes.

Don't wait for the damage to happen. Plan ahead to keep your family and property safe.

www.valleywater.org/Floodready



Report street flooding or blocked storm drains or contact your local floodplain manager to learn if your home is in a floodplain:

Campbell	(408) 866-2145	*Palo Alto	(650) 496-6974
*Cupertino	(408) 777-3269		(650) 329-2413‡
	(408) 299-2507‡	*San José	(408) 794-1900
*Gilroy	(408) 846-0444		(408) 277-8956‡
	(408) 846-0350‡	*Santa Clara	(408) 615-3080
*Los Altos	(650) 947-2785		(408) 615-5640‡
	(650) 947-2827‡	Saratoga	(408) 868-1245
Los Altos Hills	(650) 941-7222		(408) 299-2507‡
Los Gatos	(408) 399-5770	*Sunnyvale	(408) 730-7400
*Milpitas	(408) 586-2600	*Unincorporated	(408) 494-2750
	(408) 586-2400‡		(East Yard)
Monte Sereno	(408) 354-7635		(408) 366-3100
	(408) 299-2507‡		(West Yard)
*Morgan Hill	(408) 776-7333		(408) 683-1240
	(408) 779-2101‡		(South Yard)
*Mountain View	(650) 903-6329	Santa Clara Valley Water District	(408) 630-2378
	(650) 903-6395‡		

*Participating CRS communities ‡ Use this number after business hours

WHAT TO DO

Protect your family and property from flooding

before

- Consider flood insurance. To get insured, call 1-888-379-9531 or go to www.floodsmart.gov.
- Prepare a family emergency plan and emergency kit for your home and car with supplies. Store important documents and valuables in a safe deposit box. For more information, visit: **www.ready.gov/make-a-plan**
- Designate a family meeting spot.
- Examine your house for cracks in the foundation, exterior walls and small openings around pipes. Seal them.
- Build a sandbag barrier to block shallow water from entering structures. Use of sandbag guidelines: **valleywater.org/sandbags/**
- Place valuables in a high place (2nd floor, if possible) and move vehicles to higher ground.
- Keep rain gutters and drainage channels free of debris.

Download the free Flood App!
Visit **www.redcross.org/prepare/mobile-apps/flood**
Text **"GETFLOOD"** to **90999**
or search **"Red Cross Flood"** in the Apple App Store or Google Play.

during

- Be aware that flash flooding can occur. If a flood is imminent, avoid low-lying areas and seek shelter in the highest area possible.
- Tune to radio station KCBS (740 AM) for emergency information.
- If advised to evacuate, do so immediately. Turn off utilities at the main switches or valves. Disconnect electrical appliances. Do not touch electrical equipment if you are wet or standing in water.
- DO NOT drive into flooded areas. If floodwaters rise around your car, abandon the car and move to higher ground. A foot of water will cause many vehicles to float. Two feet of rushing water can carry away most vehicles, including SUVs and pick-ups.

ALERTSCC
SANTA CLARA COUNTY

Sign up for the free "Alert SCC" Santa Clara County emergency alert system at **www.alertscc.com.**

READYSCC
SANTA CLARA COUNTY

Download the ReadySCC app to get emergency notifications, create your emergency plan, follow a detailed guide for preparedness and more.

after

- Listen for news reports on whether the community's water supply is safe to drink.
- Never drive through flooded roadways. Play it smart, play it safe. Whether driving or walking, any time you come to a flooded area, **Turn Around Don't Drown®**. **bit.ly/2hBE7WD** Don't walk, swim, drive or play in floodwater.
- DO NOT walk in floodwaters. Water may be contaminated from oil, gasoline or raw sewage. Underground or downed power lines may also have electrically charged the water. Stay away from downed power lines and report them to your power company
- Return home only when authorities indicate it is safe.

Santa Clara Valley Water District

CONTACT US

See trash or downed trees in a creek? Want to report dumping or other problems? Let us know. Use our Access Valley Water customer request and information system to submit requests directly to a water district staff person. Go to **Valleywater.org** or download the **Access Valley Water App**.

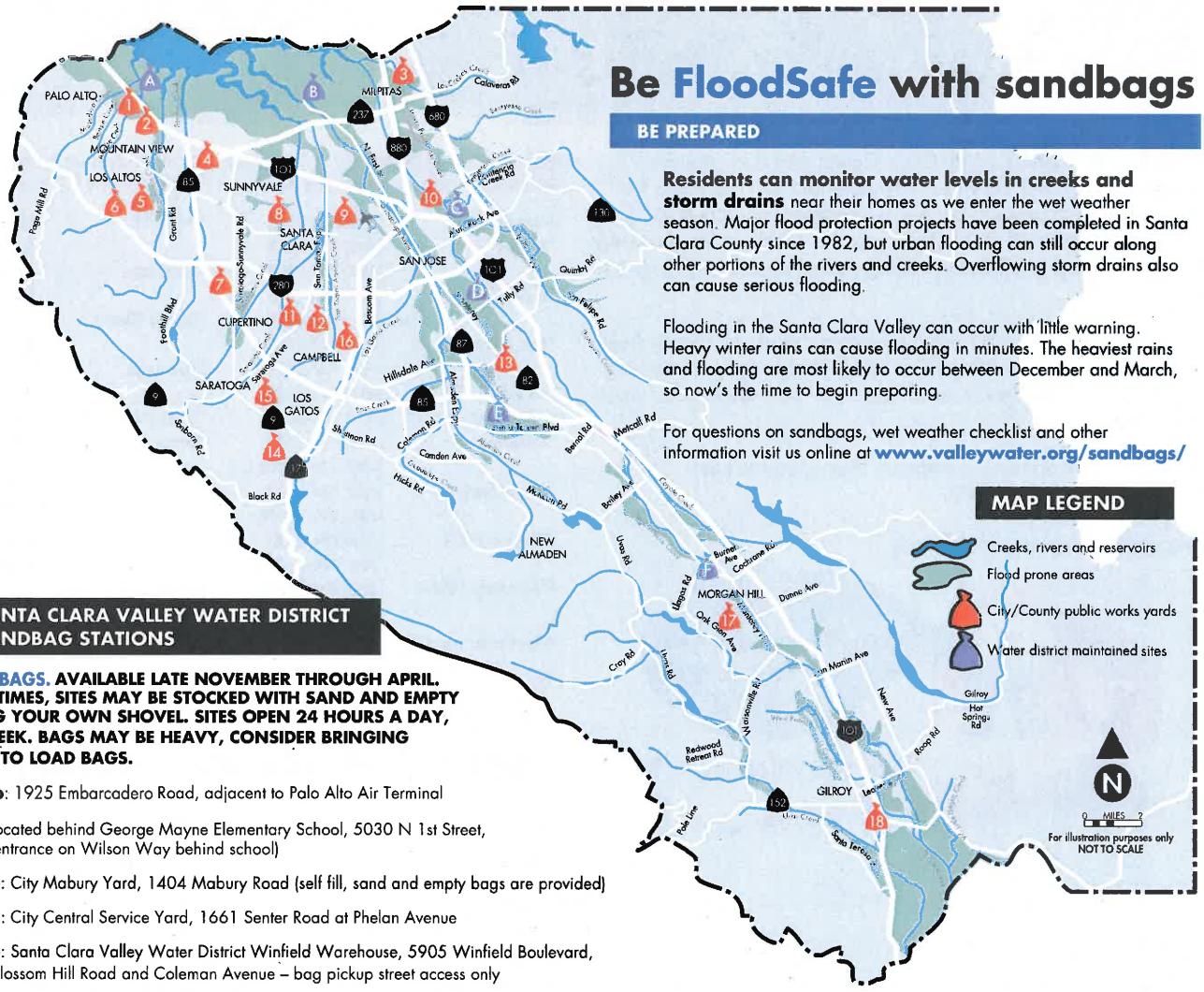
Be FloodSafe with sandbags

BE PREPARED

Residents can monitor water levels in creeks and storm drains near their homes as we enter the wet weather season. Major flood protection projects have been completed in Santa Clara County since 1982, but urban flooding can still occur along other portions of the rivers and creeks. Overflowing storm drains also can cause serious flooding.

Flooding in the Santa Clara Valley can occur with little warning. Heavy winter rains can cause flooding in minutes. The heaviest rains and flooding are most likely to occur between December and March, so now's the time to begin preparing.

For questions on sandbags, wet weather checklist and other information visit us online at **www.valleywater.org/sandbags/**



SANTA CLARA VALLEY WATER DISTRICT SANDBAG STATIONS

FILLED SANDBAGS. AVAILABLE LATE NOVEMBER THROUGH APRIL. AT CERTAIN TIMES, SITES MAY BE STOCKED WITH SAND AND EMPTY BAGS. BRING YOUR OWN SHOVEL. SITES OPEN 24 HOURS A DAY, 7 DAYS A WEEK. BAGS MAY BE HEAVY, CONSIDER BRINGING ASSISTANCE TO LOAD BAGS.

A **Palo Alto**: 1925 Embarcadero Road, adjacent to Palo Alto Air Terminal

B **Alviso**: Located behind George Mayne Elementary School, 5030 N 1st Street, (entrance on Wilson Way behind school)

C **San Jose**: City Mabury Yard, 1404 Mabury Road (self fill, sand and empty bags are provided)

D **San Jose**: City Central Service Yard, 1661 Senter Road at Phelan Avenue

E **San Jose**: Santa Clara Valley Water District Winfield Warehouse, 5905 Winfield Boulevard, between Blossom Hill Road and Coleman Avenue – bag pickup street access only

F **Morgan Hill**: El Toro Fire Station, 18300 Old Monterey Road, next to the Union Pacific Railroad overpass above Monterey Highway

OTHER SOURCES OF UNFILLED SANDBAGS

UNFILLED SANDBAGS. BRING YOUR OWN SHOVEL. EMPTY BAGS SUPPLIED BY THE WATER DISTRICT. CONSIDER BRINGING ASSISTANCE TO FILL AND LOAD BAGS. PROOF OF RESIDENCY MAY BE REQUIRED AT SOME SITES. CHECK INDIVIDUAL SITES FOR OPERATING HOURS.

1 **Palo Alto**: Mitchell Park, 600 E. Meadow Drive near baseball field. Bags and sand available all day. (650) 496-6974, after hours: (650) 329-2413

2 **Palo Alto**: Rinconada Park Tennis Court Parking Lot (intersection of Hopkins Avenue and Newell Road). (650) 496-6974, after hours: (650) 329-2413

3 **Milpitas**: 540 S. Abel Street. Additional bags located at the Sports Center at 1325 E. Calaveras Blvd. (408) 586-2643, after hours: (408) 586-2400. BOTH sites will have sand and bags 24/7.

4 **Mountain View**: Public Services, 231 N. Whisman Ave. (Located at Whisman Rd. and Gladys Ave.) (650) 903-6329, after hours: (650) 903-6395. Bags and sand available all day at parking lot.

5 **Los Altos**: Municipal Service Center, 707 Fremont Ave. at McKenzie Park parking lot. Bags and sand available all day. (650) 947-2785, after hours: (650) 947-2770

6 **Los Altos Hills**: Corporation Yard, 27500 Purissima Rd. at Little League Field at little league field, (650) 941-7222, Mon.- Fri. 7:30 a.m. - 5:30 p.m.

7 **Cupertino**: City Corporation Yard, 10555 Mary Ave. Bags and sand available all day outside the gate. (408) 777-3269, Mon. - Fri. 6 a.m. - 3:30 p.m., after hours: County Communications (408) 299-2507

8 **Sunnyvale**: Corporation Yard, 221 Commercial St. at end of California Street. Bags and sand available all day. (408) 730-7510, Mon. - Fri. 6:30 a.m. - 4:30 p.m., after hours: (408) 730-7180

9 **Santa Clara**: City Corporation Yard, 1700 Walsh Ave. (408) 615-3080, after hours: (408) 615-5640. Available 8 a.m.– 4 p.m. inside gate (Must call first)

10 **San Jose**: County East Yard, 1505 Schallenberger Rd., Mon. - Fri., 7:30 am. - 4 p.m. (408) 494-2750, after hours: County Communications (408) 299-2507

11 **San Jose**: County West Yard, 11030 Doyle Rd., bags and sand available anytime outside gate. (408) 366-3100, after hours: County Communications (408) 299-2507

12 **San Jose**: City West Yard, 5090 Williams Road, filled sandbags available anytime outside gate. (408) 277-4373

13 **San Jose**: City South Yard, 4420 Monterey Rd. at Skyway Drive, filled sandbags available anytime outside gate. (408) 361-6818

14 **Los Gatos/Monte Sereno**: 41 Miles Avenue at Balzer Field parking lot (Monte Sereno citizens pick up at Los Gatos site), bags and sand available anytime at lot. (408) 399-5770, after hours: (408) 354-8600

15 **Saratoga**: Corporation Yard, 19700 Allendale Ave., near Post Office, bags and sand available anytime outside gate. (408) 868-1245, after hours: County Communications (408) 299-2507

16 **Campbell**: City Corporation Yard, 290 South Dillon Ave., (408) 866-2145, Mon.–Fri. 7 a.m. - 3:30 p.m.

17 **Morgan Hill**: City Corporation Yard, 100 Edes Ct., Mon. - Fri. 8 a.m. - 5 p.m., open all day, bags and sand available antyime outside gate. (408) 776-7333, after hours (408) 779-2101

18 **Gilroy**: Fire Station, 7070 Chestnut St. at 10th Street, bags and sand available in the parking lot behind fire station. (408) 846-0451, after hours: (408) 846-0350 (leave msg)

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FLOOD EMERGENCY MESSAGES

PREPAREDNESS: *Stream depths are below 50% of flood stage.*
Prepare for disasters before they happen. Make a plan with your family, or download ReadySCC, a mobile app that helps you create a plan, put together a kit, and know what to do in an emergency.

WHEN YOU HEAR "FLOOD MONITORING" *Stream depths are 50% to 70% to flood stage*	WHEN YOU HEAR "FLOOD WATCH" *Stream depths are 70% or more to flood stage*	WHEN YOU HEAR "FLOOD WARNING" *Stream depths are near flood stage*
DO THIS: • Be alert, listen to news channels. • Tell neighbors to be alert. • Locate sandbags: visit www.valleywater.org/floodready. • Arrange for a place to stay in case of an evacuation. • Seniors or mobility-impaired: Ask family or friends to help you if needed. • Be ready to move your pets to another location. • Be ready to move valuable items to a secure place. • Be ready to gather important documents, medicines, spare clothes.	**DO THIS:** • Listen to the news. • Be ready to evacuate. • Protect your property with sandbags. • Seniors or mobility-impaired: Ask family or friends to get you NOW. • Move valuable items to a higher or secure place. • Consider moving pets NOW. • Be ready to move your car/s. • Pack a bag with important documents, medicines, spare clothes.	**DO THIS:** • Keep listening to the news. • Calmly evacuate NOW. • Tell your neighbors to evacuate. • Take your bag with important documents, medicines, spare clothes. • Move your car/s to high ground. • Go to a City Shelter if needed. Find shelters at www.sanjoseca.gov. • Take pets to the San José Animal Shelter for a temporary stay during disasters.
		

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RD:JAC:LCP
10/25/2017

RESOLUTION NO. _____

A RESOLUTION OF THE COUNCIL OF THE CITY OF SAN JOSE 1) APPROVING THE EMERGENCY ACTION PLAN AND AGREE TO UTILIZE THE GUIDANCE OF THE EMERGENCY ACTION PLAN BEFORE, DURING AND AFTER FLOOD EVENTS IN THE CITY OF SAN JOSE; 2) AUTHORIZING THE CITY MANAGER OR HIS/HER DESIGNEE TO EXECUTE THE EMERGENCY ACTION PLAN AND IMPLEMENT ITS TERMS; AND 3) AUTHORIZING THE CITY MANAGER OF HIS/HER DESIGNEE TO APPROVE ANY FUTURE AMENDMENTS OR UPDATES TO THE EMERGENCY ACTION PLAN FOLLOWING SATISFACTION OF THE PROVISIONS OF SECTION 1(J) OF THE EMERGENCY ACTION PLAN

WHEREAS, the Federal Emergency Management Agency ("FEMA") has identified that floods are the most frequent and costly natural disaster in the United States; and

WHEREAS, the State of California Office of Emergency Services ("Cal OES") has identified that floods are the second most frequent cause of disaster declarations in California (after wildfires) and account for the second highest combined losses (after earthquakes); and

WHEREAS, at a joint meeting on April 28, 2017, the City Council of the City of San Jose ("City") and Board of Directors of the Santa Clara Valley Water District ("SCVWD") discussed how to improve coordination and decision making during flood events; and

WHEREAS, based on direction from the City and SCVWD at the April 28, 2017 meeting, a working group of the two agencies was tasked with development of a joint Emergency Action Plan ("EAP") designed to provide guidance and an approach to ensure communications, planning and implementation between the agencies regarding threatened and actual flooding emergencies; and

WHEREAS, the EAP was designed to establish guidance for the City, the SCVWD, and other stakeholders to facilitate: (1) pre-incident planning prior to a storm/flood event; (2) coordination of interagency response and recovery operation; and (3) collaboration on public messaging for potential, imminent, and actual flooding along creeks within the City; and

WHEREAS, under the EAP, the City and SCVWD will work in unity when flooding is estimated, imminent or occurring, the creation of the EAP by teams from both agencies establishes a firm basis for the Multi-Agency Coordination concept in preparing for and responding to future flood events; and

WHEREAS, on September 21, 2017, the draft EAP was tested by City and SCVWD staff during a multi-agency table top exercise, and revisions were thereafter made to the EAP to put it in its existing form; and

WHEREAS, the final version of the EAP (attached hereto as **Exhibit-A** and incorporated herein by this reference as though fully set forth herein) was presented during the joint meeting between the City and SCVWD on November 3, 2017; and

WHEREAS, the City, having reviewed and considered the EAP, finds it to be sufficient and complete;

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF SAN JOSE THAT:

1. Approves the EAP and agree to utilize the guidance of the EAP before, during and after flood events in the City of San Jose.

2. Authorizes the City Manager or his/her designee to execute the EAP and implement its terms.

3. Authorizes the City Manager of his/her designee to approve any future amendments or updates to the EAP following satisfaction of the provisions of section 1(J) of the EAP (Maintenance of EAP).

ADOPTED this _____ day of _____, 2017, by the following vote:

AYES:

NOES:

ABSENT:

DISQUALIFIED:

SAM LICCARDO
Mayor

ATTEST:

TONI J. TABER, CMC
City Clerk

EXHIBIT A

Joint Emergency Action Plan for Severe Storm and Flood Response in the City of San Jose

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BOARD OF DIRECTORS,
SANTA CLARA VALLEY WATER DISTRICT

RESOLUTION NO. 17-

ADOPTION OF JOINT EMERGENCY ACTION PLAN FOR SEVERE STORM AND FLOOD RESPONSE IN CITY OF SAN JOSE

WHEREAS, the Federal Emergency Management Agency (FEMA) has identified that floods are the most frequent and costly natural disaster in the United States; and

WHEREAS, the State of California Office of Emergency Services (Cal OES) has identified that floods are the second most frequent cause of disaster declarations in California (after wildfires) and account for the second highest combined losses (after earthquakes); and

WHEREAS, at a joint meeting on April 28, 2017, the City of San José (City) Council and Santa Clara Valley Water District (SCVWD) Board of Directors discussed how to improve coordination and decision making during flood events; and

WHEREAS, based on direction from the City and SCVWD at the April 28, 2017 meeting, a working group of the two agencies was tasked with development of a joint Emergency Action Plan (EAP) designed to provide guidance and an approach to ensure communications, planning and implementation between the agencies regarding threatened and actual flooding emergencies; and

WHEREAS, the EAP was designed to establish guidance for the City, the SCVWD, and other stakeholders to facilitate: (1) pre-incident planning prior to a storm/flood event; (2) coordination of interagency response and recovery operation; and (3) collaboration on public messaging for potential, imminent, and actual flooding along creeks within the City; and

WHEREAS, under the EAP, the City and SCVWD will work in unity when flooding is estimated, imminent or occurring, the creation of the EAP by teams from both agencies establishes a firm basis for the Multi-Agency Coordination concept in preparing for and responding to future flood events; and

WHEREAS, on September 21, 2017, the draft EAP was tested by City and SCVWD staff during a multi-agency table top exercise, and revisions were thereafter made to the EAP to put it in its existing form; and

WHEREAS, the final version of the EAP (attached hereto as **Exhibit-A** and incorporated herein by this reference as though fully set forth herein) was presented during the joint meeting between the City and SCVWD on November 3, 2017; and

WHEREAS, the Board, having reviewed and considered the EAP, finds it to be sufficient and complete.

NOW, THEREFORE BE IT RESOLVED that the Board of Directors of the Santa Clara Valley Water District does hereby:

1. Approve the EAP and agrees to utilize the guidance of the EAP before, during and after flood events in the City of San Jose;

2. Authorize the SCVWD's Chief Executive Officer or his/her designee to execute the EAP and implement its terms; and

3. Authorize the SCVWD's Chief Executive Officer or his/her designee to approve any future amendments or updates to the EAP following satisfaction of the provisions of section 1(J) of the EAP (Maintenance of EAP).

PASSED AND ADOPTED by the Board of Directors of the Santa Clara Valley Water District by the following vote on November 3, 2017:

AYES: Directors

NOES: Directors

ABSENT: Directors

ABSTAIN: Directors

SANTA CLARA VALLEY WATER DISTRICT

_____
JOHN L. VARELA
Chair/Board of Directors

ATTEST: MICHELE L. KING, CMC

_____
Clerk/Board of Directors

EXHIBIT A
COVERSHEET

JOINT EMERGENCY ACTION PLAN FOR SEVERE STORM AND FLOOD RESPONSE IN CITY OF SAN JOSE

No. of Pages: *Insert No. Pages*

Exhibit Attachments: **Attachment 1:** Joint Emergency Action Plan for Severe Storm and Flood Response in City of San José

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Joint Emergency Action Plan
for
Severe Storm and Flood Response
in
City of San José

Last Revised:

October 30, 2017

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EXECUTIVE SUMMARY—JOINT EMERGENCY ACTION PLAN

Following the direction of the City of San José City Council (City) and Santa Clara Valley Water District Board of Directors (District) on April 28, 2017, a joint working group of the two agencies was tasked with development of an Emergency Action Plan (EAP) designed to provide guidance and an approach to ensure communications, planning and implementation between the agencies regarding threatened and actual flooding emergencies. The resulting plan is based on the concept of a Multi-Agency Coordination (MAC) Group. The EAP was drafted by a combined team of City and District staff, tested with independent reviews and in a multi-agency Table Top Exercise. This is responsive to knowledge gained from past flood events and is meant to serve as guidance during severe storms or flood events.

Three important improvements embodied in the EAP are:

1. The two agencies should work as a single entity when flooding is estimated, imminent or occurring – the creation of the EAP by teams from both agencies establishes a firm basis for the MAC concept in preparing for and responding to future flood events.
2. A shared set of determining factors, definitions and estimation elements should be established between the two agencies – the EAP sets forth clear plans for definitions and language based on National Weather Service standards, defines specific steps to establish visible gauges and flood-level indicators in streams at critical locations; establishes a publicly visible FloodWatch website with continually updated situational information.
3. Decision-making, action planning and public communications must be based on a single, shared set of graduated operational levels, which was referred to as the "creek flood condition levels" by the working groups in developing this EAP. Depending on available detailed flood stage modeling, the condition can be further described for severity of flooding in specific locations. The four threat stages and flood severity are keyed to National Weather Service levels of alert.

The operational and mobilization elements of the EAP provide specific guidelines to the appropriate functional departments and management staff of both agencies for joint decision-making and mobilization of resources during all four levels of the flood threat matrix.

A section of the EAP is dedicated to how communications with the public will be planned and deployed, depending on the level of the operational status and with specific reference to the audiences to be reached, the messages and the communications channels.

This EAP will provide oversight and guidance. It is not intended to provide ultra-detailed action lists of what to do during storm and flood monitoring and response, as the Stakeholders are individual jurisdictions and have independent responsibility with limited resources to accomplish their tasks.

By signing here, on November 3, 2017, the City of San José City Manager and the Santa Clara Valley Water District Chief Executive Officer agree that the two primary Agency Stakeholders will respond according to the concepts outlined in this updated EAP and will continue work on maintaining the EAP, associated projects, and continually work to improve preparedness, mitigation and response to the next flood emergency:

Dave Sykes, City Manager City of San José	Norma Camacho, Chief Executive Officer Santa Clara Valley Water District

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ACRONYMS

Readers of this plan may find it useful to understand the Acronyms used in the document.

Acronym	What is it
AC	Agency Coordinator
ALERT	Automated Local Evaluation in Real Time
AP	Action Plan
AR	Agency Representative
CalOES	California Office of Emergency Services
City	City of San José
District	Santa Clara Valley Water District
DCC	Departmental Command Center
DOC	Department Operations Center
DWR	California Department of Water Resources
EAP	Emergency Action Plan
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPIWCC	Emergency Public Information Warning Core Capability
FEMA	Federal Emergency Management Agency
FIT	Field Information Team
IAP	Incident Action Plan
IC	Incident Command(er)
ICS	Incident Command System
IPAWS	Integrated Public Alert Warning System
JIC	Joint Information Center
JIS	Joint Information System
LFO	Lookout field observation
LHMP	Local Hazard Mitigation Plan
LRAD	Long Range Acoustical Device
MAA	Mutual Aid Agreement
MAC	Multi-Agency Coordination
MAC Group	Multi-Agency Coordination Group
MEOC	Mobile Emergency Operations Center
NWS	National Weather Service
OEM	Office of Emergency Management
OES	Office of Emergency Services
PIO	Public Information Officer
SME	Subject Matter Expert
UC	Unified Command(ers)
vMAC	Virtual Multi Agency Coordination Group

DISTRIBUTION OF THE PLAN

Electronic Version

A copy of the ***Joint Emergency Action Plan*** is located on a secure intranet server. Access to the intranet electronic materials is granted to those with designated EAP responsibilities.

Hardcopy Distribution

This EAP is readily available to key personnel that have roles and responsibilities in the implementation of the EAP. Portions of the EAP will also be issued to outside response agencies whose familiarity with the EAP is essential to its implementation. This EAP contains potentially sensitive information that identifies critical assets.

Distribution of the EAP is documented the following Log.

EAP Number	Title	Organization	Number of Copies

PLAN UPDATES

The City of San José Office of Emergency Management is responsible for EAP review and amendment distribution. Pre-identified staffs from the City, District, and other Stakeholders review the EAP annually. Based on this review, needed updates are prepared and issued. For instance, updates are made to the EAP when there are changes in the contact lists or roles and responsibilities of those involved in response activities. Updates are also included whenever there is an operational change to the facilities or systems that affects EAP content. Every five years the entire plan will be reviewed, revised, re-published, and distributed. Those receiving the update will destroy old copies.

Other EAP review and/or amendment triggers include, but are not limited to, the following:

1. After each incident that requires activation of the EAP
2. After each exercise testing the effectiveness of the EAP
3. Changes in the following types of information:
    - Roles or responsibilities of EAP identified positions or departments, and roles and responsibilities of other EAP identified outside agencies or organizations;
    - Facility construction, operation, maintenance, or other circumstances that alter the hazards or methods of response to an incident; or
    - Applicable regulations or laws.

Amendments to the EAP are recorded on the Revision Log. Once a need for EAP changes are identified, the change will be documented in the Revision Log. A hard copy of the log will be attached to the appropriate pages where the changes occurred. The distribution will follow the previous Distribution Log. Electronic updates will be made to the copy on the secure intranet server.

Revision Log

Revision No.	Description of Revision	Date Issued	Approved By
1	Joint EAP Adopted	2017	
2			
3			
4			

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1. INTRODUCTION

A. Purpose of the Joint Emergency Action Plan (EAP)

The Federal Emergency Management Agency (FEMA) has identified that floods are the most frequent and costly natural disaster in the United States and estimates that there are about 38,000 parcels in the City of San José (City) subject to flooding in a 100-year flood event (1% flood). With this in mind, there exists an opportunity to enhance coordination and communication between the two primary jurisdictions responsible for protecting the people and property in the City from floods.

The City Council (City) and Santa Clara Valley Water District (District) Board of Directors met on April 28, 2017, to discuss how to improve coordination and decision making during flooding events setting out the development of this plan. Development of this EAP proceeded jointly with extensive involvement of management and personnel of both jurisdictions. The development was overseen by a Management Team and utilized six workgroups to prepare the EAP and to plan and implement other actions to mitigate the flood concerns:

1. Emergency Action Plan
2. Technical
3. Communications
4. Action Planning
5. Creek Management
6. Short-Term Project

This Emergency Action Plan (EAP), which is based on the successful San Francisquito Creek Multi-Agency Coordination (MAC) and Operational Plan, is designed to establish general guidance for the City, the District, and other Stakeholders to facilitate:

1. Pre-incident planning prior to a storm/flood event,
2. Coordination of interagency response and recovery operation, and
3. Collaboration on public messaging for potential, imminent, and actual flooding along the creeks in San José.

B. Stakeholders

All parcel owners along the water ways within the City of San José are Stakeholders and have responsibilities identified in this EAP. This includes the Agency Stakeholders (City, District, Santa Clara County, and San José Unified School District) and Private Property Stakeholders. Combined these are the Stakeholders responsible for the tasks identified in this EAP. Stakeholders combined have a responsibility to respond to the needs of residents, business, property owners, and the environment when affected by severe

storms that create floods within city boundaries. There are other agencies/entities that have a role in preparing and responding to flood events, who may have specified roles to support the response. For example, Santa Clara County Office of Emergency Services provides support for assisting in warning.

C. Structure of this EAP

The plan is organized in three sections:

Base Plan	The Base Plan identifies the roles, responsibilities and actions assigned to the Multi-Agency Coordination (MAC) Group.
Attachments	Attachments include information and checklists useful in any Severe Storm or Flood Incident.
Appendices	Provides specific details on each water way.

D. Relationship to other Plans

This EAP does not supersede existing agreements or internal plans (except to introduce a preference regarding the relationship between a jurisdictional EOC and staffing a MAC Group at a facility). Terms, such as the definition of "disaster" and certain legal and procedural activities, are found in the Agency Stakeholders Emergency Operations Plans (EOPs). Therefore, they are not repeated in this EAP. Flood maps and other such background material are posted in the Local Hazard Mitigation Plan (LHMP) for the involved jurisdictions.[1]

Agency Stakeholders are encouraged to regularly review their internal plans, discuss them with the MAC Group, and review other guidance such as the State of California Guidelines for Coordinating Flood Emergency Operations.[2]

E. Definition of a MAC Group

The primary concept used in this EAP is for the City, District and other Agency Stakeholders to operate as a Multi-Agency Coordination (MAC) Group. Per the *California Statewide Multi-Agency Coordination System Guide* (rev. Feb. 2013):

> "A Multi-Agency Coordination Group may be convened by an EOC Director ... to establish priorities among multiple competing incidents, provide coordinated decision making for resource allocation among cooperating agencies, harmonize agency policies, and offer strategic guidance and direction to support incident management activities. MAC Groups convene to prioritize incidents for the allocation of scarce resources. Group members should consist of administrators

[1] www.sccgov.org/sites/oes/LHMP/Pages/Local-Hazard-Mitigation.aspx
[2] www.water.ca.gov/floodmgmt/docs/guidecoordfloodemergops.pdf

or executives, or their designees, who are authorized to commit agency resources and funds."[3]

Routinely, field first responders implement a version of a MAC, known as Unified Command. "First responders successfully utilize multi-agency coordination whenever multiple agencies respond to an incident, through Unified Command. Unified Command provides multi-agency support and coordination when an incident grows in complexity or multiple incidents occur in the same period."[4]

In cases where there are multiple incidents (as is common in storm/flood incidents), there may be multiple Incident Commanders (ICs), in which case an Area Command Incident Command System (ICS) structure may be implemented in addition to this prescribed MAC Group.

Figure 1: Coordination Links

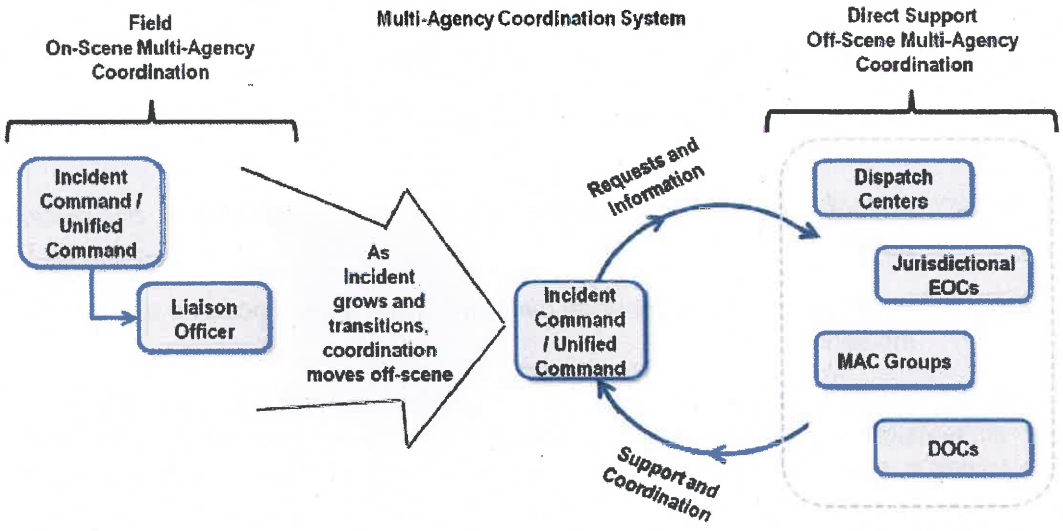


Figure 1 shows coordination links of a MAC can be established to support or facilitate coordination among Incident Commanders, Unified Command, Emergency Operations Centers, Dispatch Center and Department Operations Centers. ***The preferred staffing and operational mode will be to physically co-locate personnel from the City, District and other Agency Stakeholders at a designated facility when feasible***, particularly in the Watch or Warning phases of response. This will:

[3] *California Statewide Multi-Agency Coordination System Guide* (Rev. Feb. 2013)
[4] *California Statewide Multi-Agency Coordination System Guide* (Rev. Feb. 2013)

1. Economize on staffing, and

2. Improve efficiency and communications.

The need for and use of a MAC is dynamic and depends on the potential and real impacts of a potential or active storm(s). A Virtual MAC (vMAC) can be used during Preparedness or Monitoring phases and may be considered for other phases as staff is available to physically co-locate to a MAC facility.

F. Intention of the organization and protocols noted in the EAP

This EAP provides guidance on how to staff and organize a MAC Group, and collaborate on preparedness and the response to potential, imminent, and actual flooding along the creeks in the City. To accomplish this, the intent of the plan is to provide:

1. Overarching guidance on how and when to activate a MAC for coordination purposes,

2. Suggested levels of activation of the MAC Group,

3. Suggested participants in each level of MAC activation and their decision authority,

4. Means and methods of collaborative planning, preparedness, and response activities, and

5. A document that will change over time, from experience and updates after an incident.

In the end, this EAP describes MAC mobilization procedures for maximum utilization of all available resources during a severe weather, storm, or flood event that present a risk to public safety or where disruption of transportation, utilities or other services or infrastructure is anticipated or occurs.

"Severe weather" includes situations of extreme temperatures, atmospheric rivers or atypical atmospheric phenomena (tornados, etc.).

G. Focus Area(s) associated with the Emergency Operations Plan

The MAC Group includes personnel already assigned a role and responsibility in the Emergency Operations Plan (EOP) for the City, District or other Stakeholders. The EOP responsibilities continue to require attention. The effort of the MAC Group assignments is to insure the response decisions consider what the impact of the storm has on the given focus areas that will arise during a flood scenario. This could include:

- Identifying Flood Zones: known flood zones; flash floods
- Identifying Transportation Routes and Roads Conditions: blocked roads (trees down, wires down, water, debris)
- Taking Traffic Control Measures: signals out, flooded areas

- Locating Mudslides/Landslides: especially in the Foothills
- Supporting Communications: loss of telephone, internet, and other systems
- Identifying Utility Outages: electrical, telephone, internet, others
- Addressing Public Health Issues: mold, disease, etc., particularly after a storm/flood; failure/impairment of wastewater treatment (sewage) or drinking water supply systems
- Activating Evacuation Sites and Shelters: instructing community members on which routes to take and where to go for aid (Red Cross, etc.)
- Responding to Crime: opportunistic crime, looting, etc.
- Stabilizing the Economy: support recovery of private sector, coordinate with regional and Federal resources
- Addressing Environmental Issues: damage to ecological and other resources
- Other Events: severe weather often can coincide with other events that already stretch local resources, such as San José State planned events, holiday parades, or the holiday shopping season.

H. Limitations of the EAP

This EAP shall not constrain the freedom of an Incident Commander (IC) in the field or others when dealing with the referenced events. This EAP does NOT and will NOT replace or override an Agency's:

- Emergency Operations Plans,
- Department Operations Center Plans,
- Public Safety Authority,
- Public Information Officer role/responsibility,
- Purchasing Authority, nor
- Responsibility for documentation for any state or federal Declaration of Emergency.

Instead this EAP will focus on how the responsible agencies can improve coordination before, during and after a flood incident. This EAP provides oversight and guidance. It is not intended to set precedent or commit resources without knowledge of the conditions that may occur, nor provide ultra-detailed action lists of what to do during storm and flood monitoring and response, as the Stakeholders are individual jurisdictions and have independent responsibility to accomplish their tasks. The conditions of the emergency dictate the response needs

and availability of staff and resources as each emergency can be different and updates in stream management and control systems could vary the conditions. The City, District and other Stakeholders will utilize this EAP as needed to develop joint decisions and actions based on the situation and their jurisdictions capabilities, resources and priorities.

While the EAP or an Appendix may reference an activity related to facility improvements or maintenance, those will be done through separate plans or activities.

I. Training on the EAP

To test the concepts and mobilization activities described in the EAP, the City will work with the other Stakeholders to annually engage all appropriate agencies and agency staff to conduct discussion-based exercises such as Workshops, Seminars or Tabletop Exercises. Operational exercises such as Drills can be conducted to test communications or notification systems. Functional Exercises can be conducted to test the relationship between activated Emergency Operations Centers (EOC) and the MAC Group. Each Stakeholder is encouraged to test their participation in the MAC when they conduct exercises.

J. Maintenance of EAP

The San José Office of Emergency Management (OEM), serving as the chair of the MAC, during preparedness, maintains this EAP. The San José EOC Director is the chair during an emergency. Prior to every winter season, OEM will review this EAP with the District and other agencies, as needed. Following an exercise or an incident, the City of San José will conduct an After-Action Review of the EAP with the participating Agency Stakeholders.

The City OEM Director is responsible for revising the EAP document as agreed upon by the participants in the exercises. Updates to the EAP do not require City Council or District Board approval; however, the San José City Manager and District Chief Executive Officer or their designee will approve of revisions and other Agency Stakeholders must be notified of the revision. When revisions occur, the City OEM Director will provide the revised pages and an updated revision summary page to all designated document holders. EAP document holders are responsible for updating outdated copies of the respective documents whenever revisions are received. Outdated pages shall be immediately discarded to avoid any confusion with the revisions.

K. Use of the EAP

This document is intended to be used by the Agency Stakeholders for integrating with MAC Group members, before, during and after a storm. Some response data includes restricted or sensitive information. The restricted portions of this document will clearly be indicated on the subject pages and will not be distributed or made available externally to individuals outside of the Agency Stakeholders or not on the original distribution list. The Agency Stakeholders may distribute this internally but are to handle with the same care as other restricted documents.

2. CONCEPT OF OPERATIONS

A. Operational Levels

The concepts and activities described in this EAP are associated with the level of storm or flood threat. To maintain the collaborative nature of a MAC, this EAP is considered active 12 months of the year, 24 hours a day, and 7 days a week. The principles and actions of a MAC are integrated at all levels. The intensity and degree of activity will increase along with stream and creek conditions. The flood condition levels utilized in this EAP are consistent with the National Weather Service and defined as:

Table 1: Flood Condition Levels

Green	**Preparedness** - Flood stage is not estimated within the next 72 hours; and measured stream depth is below 50% of flood thresholds. By nature of a regular physical meeting between agency personnel from multiple agencies, a MAC is formed.
Yellow	**Monitoring** – Stream depth is estimated to reach flood stage in 72 hours plus, or the measured stream depth is 50% to 70% of flood stage. This condition is variable and requires more intense monitoring and a heightened level of alertness. Minimal staff in each Stakeholder's Emergency Operations Center (EOC) may be activated. A virtual MAC could be activated. An informal EOC Action Plan (AP) could be initiated.
Orange	**Watch** – Stream depth is estimated to reach flood stage within 24 to 72 hours or measured depths are at 70% to 100% of flood stage. The Stakeholders' would increase staff in their EOCs, if not yet activated, and a MAC facility could be established. A formal EOC AP will be drafted.
Red	**Warning** – This is an urgent situation when flood stage or greater is estimated to occur within 24 hours, or is occurring. The Stakeholders' EOC will have been activated and would be monitoring the situation, providing notifications and responding according to a written AP.

B. Determining Flood Condition Levels

While the primary purpose of this EAP is to provide guidance to the Stakeholders during emergencies, **the EAP is in a state of perpetual activation, throughout the year, regardless of the condition**. For the majority of the time Stakeholder operations are focused on preparedness. Preparedness is critical to reduce the risk of flooding and during this period, Stakeholders perform activities consistent with their jurisdictional responsibilities. Table 2 below describes some of the activities performed by the

Stakeholders during the preparedness condition level. These are examples and are not all-inclusive and may change based on the situation and needs.

As storm conditions progress, there are four general steps the Agency Stakeholders follow to determine the level at which to activate the EAP, or when to increase the EAP condition level.

Step 1: Event detection, evaluation, classification

Event Detection - There are several detection methods that include weather forecasts, hydrologic/hydraulic modeling, Automated Local Evaluation in Real Time (ALERT) stream/reservoir/precipitation gauge systems, and field observation of stage gauges and other areas of high flow.

Weather Forecasts

The National Weather Service (NWS) provides weather (e.g., precipitation) forecasts up to 72 hours in advance of a storm event and the District contracts with a service provider for enhanced forecasting.

During storm events, the NWS will host WEBINARs with affected agencies and utilities to discuss forecasts and share information to enhance regional preparedness. The Stakeholders participate in these WEBINARs and share all current information.

Hydrologic/Hydraulic Modeling

Based on the weather forecast, the District and the NWS River Forecast Center utilize computer modeling of the watershed and creeks to estimate severity of flooding. These models are considered estimates and can vary, sometimes significantly, from the actual flood flows. This is especially true in unmodified stream systems.

To improve the accuracy of the modeling, the District reviews the computer models periodically and determines if additional information can be gathered to update the models. The typical type of information that can used to update the models includes: surveys of channel geometry, reevaluation of channel roughness due to vegetation or blockages, and data gathered during high flow events.

The NWS has limited modeling capability and generally focuses on broader areas due to their larger area of scope. The District is often more focused and detailed in their modeling and utilizes additional available information for modeling. As modeling results become available, the District and the NWS will share results to help improve accuracy of the estimations.

With the results of modeling, condition levels can be assigned and severity of flooding can be estimated such that appropriate notices can be made. The NWS will issue threat level information, which is similar to the EAP condition levels.

ALERT Gauge System

A listing of all ALERT gauges can be found at http://alert.valleywater.org/sgi.php. These gauges provide data in near real-time on most creeks in San José and can provide critical data to determine the level of threat for flooding.

The following is a summary of the current stream gauge program:

(a) Annually sites will be prioritized for manual gauging and teams are assigned to inspect and maintain the gauges.

(b) After every high flow event, the rule curves (depth versus discharge) are updated/calibrated.

Field Information Teams (FIT)

As water levels increase in the creeks, rivers, and waterways, City and District Field Information Teams (FITs) are deployed to visually monitor and report back to a DOC or EOC the rate of increase in areas of potential flooding. In addition, FITs can monitor the surface drainage and the effect of landslides to City streets. The City, District and other Agency Stakeholders have individual teams who respond to designated "hot spots". Deployment of these FIT teams are coordinated between the City's DOCs and the District's DOC (or other facility).

Evaluation - After detecting and gathering adequate intelligence regarding the situation, an evaluation of the water way conditions must be performed by appropriate personnel.

Classification - Based on evaluation of the threat, a specific threat level will be identified and documented at the Agency Stakeholder DOC (or other facility) and EOC so all staff recognize the determined level (Monitoring, Watch, or Warning). If possible, the severity of flooding will also be determined and documented. The severity is consistent with the NWS and are: minor, moderate, and major with the affected areas described. The specifics of the severity are included in the Appendices of this EAP

Step 2: Notification and Communication

After the condition level has been determined, appropriately communicating the situation to responsible agencies, staff, and other identified individuals and groups is critical. Notification will include City, District and other Stakeholders personnel, elected officials, and the National Weather Service, as a minimum. The contact list is in Attachment 1 Emergency Contacts.

Table 2: Progressive Responsibilities

	Responsibility/Activity	Stakeholder*
Preparedness		
	Provide technical data on mitigation and preparedness measures	Each Stakeholder is lead for own agency resources.
	Conduct field inspections of creeks and facilities	Each parcel owner is lead in own right of way.
	Jointly discuss property management needs and plans	Each parcel owner is responsible.
	Inventory and Procure Flood Fighting Materials and Equipment	Each Stakeholder is lead for own materials and equipment.
	Perform mitigation work to reduce flood risk	Each Stakeholder is lead on own property. By agreement can release to others.
	Involve FEMA Floodplain Manager who maintains the National Flood Insurance Program (NFIP) Community Rating System (CRS) certification	City is lead.
	Implement and enforce building codes for building in floodplains	City is lead.
	Provide technical floodplain mapping expertise	District is lead.
	Maintain equipment, gauges, telemetry, communications systems, etc.	District lead for stream gauges and District equipment. City lead for city equipment.
	Develop and maintain computer models of watersheds and creeks	District is lead.
	Participate in winter preparedness workshop	District is lead.
	Participate in annual EAP review/exercise/updates; ensure plan is functional and up to date	City is lead.
	Update EAP and Contact/Roles list and provide revisions to Stakeholders	City is lead.
	Manage flood information websites	Each Stakeholder manages own site; points to water district for flow.
	Publish Preparedness Public Outreach (e.g., Winter Preparedness) in multiple languages	District is lead.
	Provide public education in multiple languages	Each Stakeholder is lead for own agency resources
	Provide resources to support on-going activity to support this EAP and mitigation efforts along waterways in multiple languages	Each Stakeholder is lead for own agency resources.

	Responsibility/Activity	Stakeholder*
	Update Emergency Communications Plan and notification systems	City is lead.County is key support for warning.
Monitoring		
	Activate the EAP for "Monitoring"	City is lead.
	Notify staff of own agency about the increased condition level	Each Stakeholder is lead for their staff.
	Conduct formal monitoring, communicate via virtual systems; communicate with Agency Coordinators to determine next level of activation.	Each Stakeholder is lead for own agency resources.
	Communicate risk to EOC/MAC representatives	Each Stakeholder is lead within their agency.
	Respond to, and mitigate, minor events as needed; coordinate with each responding agency	Each Stakeholder is lead for own materials and equipment.
	Stage equipment at localities likely to be affected as needed; coordinate with each responding agency	Each Stakeholder is lead for own materials and equipment.
	Provide public education in multiple languages	Each Stakeholder collaborates and is lead to their constituents.
	Provide information to Elected Officials	Each Stakeholder PIO is lead for own agency.
	Confer with EOC Director on conditions for activating next level	City is lead.
	Confer with EOC Director for activation of a MAC	City is lead.
	Identify location for flood fighting resources for the public (e.g. sandbag locations)	District is lead.
	Review evacuation planning needs	City is lead.
	Report to designated MAC facility when directed, and available	Each Stakeholder responds to designated MAC facility.
Watch		
	Activate the EAP for "Watch"	City is lead.
	Manage information from the Department Operations Center or like facility	Each Stakeholder is lead within their agency.
	Allow the DOC (or like facility) to manage field response	Each Stakeholder is lead within agency resources
	Communicate risk to EOC/MAC representatives	Each Stakeholder is lead within their agency.

	Responsibility/Activity	Stakeholder*
	Notify staff of own agency about the increased condition level	Each Stakeholder is lead for own agency.
	Confer with responding Agency Coordinators to determine response coordination needs and resources needs	Each Stakeholder is equally responsible for cross coordination.
	Respond to, and mitigate, minor events as needed; coordinate with each responding agency	Each Stakeholder is lead for own materials and equipment.
	Stage equipment at localities likely to be affected as needed; coordinated with each responding agency	Each Stakeholder is lead for own materials and equipment.
	Update location for flood fighting resources for the public and supply additional resources as needed (e.g. sandbag locations)	District is lead.
	Provide public information in multiple languages	Each Stakeholder collaborates and is lead to their constituents.
	Provide public warning in multiple languages	City is lead. County is key support.
	Deploy LRAD and activate other public notification systems, as appropriate	City is lead.
	Provide information to Elected Officials	Each Stakeholder is lead for own agency.
	Activate JIS/JIC as appropriate	City is lead.
	Communicate with media as needed	Each Stakeholder is lead for own agency.
	Provide information on impact and available resources to and from respective EOCs	Each Stakeholder is lead for own agency resources
	Provide information to and from respective EOCs, including status reports and briefings	Each Stakeholder is lead.
	Confer with EOC Director for activation of a MAC, if not already done	City is lead.
	Report to designated MAC facility when directed, as available	District is lead.
	Confer with EOC Director on conditions for potential evacuation and shelter support	City EOC Staff is lead.
	Confer with EOC Director on conditions for activating next level	City is lead.
	Confer with legal staff on process for proclaiming a Local Emergency	City EOC Director is lead.
Warning		
	Activate the EAP for "Warning"	City is lead.
	Report to designated MAC facility when directed, if not already done	District is lead.
	Communicate risk to EOC/MAC representatives	Each Stakeholder is lead within their agency.

	Responsibility/Activity	Stakeholder*
	Provide public information in multiple languages	Each Stakeholder collaborates and is lead to their constituents.
	Provide public warning and shelter information in multiple languages	City is lead. County is key support.
	Activate JIS/JIC as appropriate to jointly communicate with media	City is lead.
	Implement evacuation plans and deploy resources to evacuate	City is lead.
	Coordinate resources through respective EOCs	Each Stakeholder is lead for own resources.
	Proclaim Local Emergency as appropriate	City EOC Director is lead.
* If only one Stakeholder is noted as lead, all other Stakeholders support the effort.		

Step 3: Emergency Activity/Actions

Based on the event and condition classification, activity/actions by the City, District and other Stakeholders will be determined. Table 2 identifies progressive levels of activation and actions.

Step 4: Termination

Following response to an emergency, the City will determine when to enter into recovery activities. The City EOC Director will work with the MAC Group members to determine if the threat no longer exists or if impacts require the engagement of recovery operations. Decisions on how long the EOC remains open depends on the conditions, needs of the community, and need to return to regular operations.

C. Progressive Responsibilities

As the weather conditions change, the responsibilities of the City, District and other Stakeholders adjust. The list of responsibilities provided in Table 2 illustrate in general terms what actions are needed at each threat level, and whether the City or District have the lead responsibility. More detail on how the action is completed is provided in additional tables in this document or Appendices to this EAP.

D. Facilities

The MAC Group is made up of staff from the City, District and other Stakeholders. As the conditions require the use of the MAC Group to respond during Monitoring, Watch or Warning Stages, the following systems and facilities can be considered to provide a meeting location for the MAC Group. A decision on which facility or system to implement will be dependent on, but not limited to, the impact of the incident(s), location of the incidents and the resource needs.

- Virtual MAC (vMAC): To facilitate communication between Stakeholders, particularly early on when little impact is felt by the storm, the City will initiate contact with the District and other Stakeholders via an e-mail group. The presenting conditions of the storm will identify when the e-mail will expand to conference calls, Skype, or other means to electronically communicate. If the vMAC transitions to a physical location, vMAC activities may continue to enhance communications between multiple EOCs and Department Operations Centers (DOCs). The storm conditions and availability of MAC personnel will determine the need and efficiency of the vMAC operations.

- City Emergency Operations Center (EOC): The City EOC Director will determine when to activate the MAC and make the request to co-locate City, District and other Stakeholders personnel to the City EOC to act as a MAC Group. The success and efficiency of the MAC relies on the co-location of City, District and other Agency Stakeholders. In the event that resources are limited, the City EOC Director can consider other options for where MAC staff co-locate, including continued use of the vMAC or requesting the County to support the MAC.

  The City EOC is located in the San José Police Administration and Communications building (a.k.a. PAC). The City EOC can support 30 people in the primary Operations room. It is fully equipped with backup power, radio communications, data systems, etc. The EOC is supplemented by various San José Department Operations Centers (DOC: Fire, Parks Recreation and Neighborhood Services, Police, Public Works, and Transportation).

- San José Mobile Emergency Operations Center (MEOC): The MEOC is a Type 1 command vehicle that requires the use of a commercial "tractor" to pull it. It can accommodate 12 staff inside. The SJ MEOC can function as a back up to the EOC or provide support to an Incident Commander in the field. If conditions require the use of the SJ MAC, notifications will go out to members of the MAC.

E. Equipment and Tools

Whenever a MAC facility is opened, preparedness activities will ensure the availability and operability of internet access, radios, telephones, and hard copy EOC forms. All representatives responding need to bring their own:

- Identification
- Computer (with appropriate software or modeling systems)
- Data on a USB drive such as contact lists, forms, etc.
- Copies of their respective Emergency Operations Plans and relevant annexes (hardcopy or electronic) and this EAP

F. MAC Group Personnel

The effectiveness of the MAC Group relies on the designated level of authority provided to each Stakeholder representative and the level of the MAC Group activation. Based on

the event condition level and related potential for flooding, the personnel who staff the MAC may evolve, due to the knowledge and authority required.

Subject Matter Experts: Staff from the City, District and other Stakeholders who have specific knowledge related to the issues of permitting, flood control dynamics, creek flow, potential impacts of flood, geology, hydrology, flood monitoring, engineering and flood response.

- ***Personnel:*** These may be personnel assigned to the Operations or Planning Section in their respective Emergency Operations Plan/Emergency Operations Center (EOP/EOC).

- ***Authority includes***: Represent Agency on technical matters; Confer with Agency Coordinators (AC) regarding activation of next level; and Engage outside resources such as National Weather Service.

Agency Coordinators: Staff from the City, District and other Stakeholders who have specific knowledge that will facilitate modifications to plans and procedures, are knowledgeable of the issues related to flood control conditions and maintenance, and have authority to recommend actions or updates to plans.

- ***Personnel:*** These may include personnel assigned to the following EOP/EOC positions:

    - City Department managers from:
        - Law Enforcement
        - Fire and Rescue
        - Public Works
        - Transportation
        - Parks, Recreation and Neighborhood Services
        - Emergency Management (EM)

    - District managers from:
        - Watersheds
        - Water Utility

- ***Authority includes***: Represent Agency in discussion of plans and procedures; Direct access to Agency Representative; Ability to affect Agency operations to support response and mitigation; Ability to affect Agency operations to coordinate with other designated MAC Group members; Represent Agency in MAC Group decision-making; and Communicate with next level of Agency management; and to request activation of next level.

Public Information Officers (PIO): Staff from the City, District and other Stakeholders who have experience with managing and disseminating information to the public via traditional media, social media, electronic methods or other tools with the purpose of distributing preparedness, response, evacuation and recovery information.

- ***Personnel:*** These may include personnel assigned to the following EOP/EOC positions:

  - Public Information Officer

- ***Authority includes***: Ability to create and distribute outreach materials for community awareness and preparedness; Represent each Agency to produce and distribute public notices regarding potential flood, as appropriate; and City PIO initiates activity to disseminate evacuation orders and shelter information.

Agency Representative (AR): Staff from the City, District and other Stakeholders authorized to re-allocate their own agency resources, provide directives and affect emergency orders. City AR makes final decision on the level of activation of the EAP and on evacuation order.

- ***Personnel:*** These may include personnel assigned to the following EOP/EOC positions:

  - City:
    - City Manager
    - Assistant City Manager
    - Deputy City Manager

  - District:
    - Chief Operating Officer
      - Administration
      - Watershed
      - Water Utility
      - External Affairs

- ***Authority includes***: Ability to commit or redirect their own Agency resources to common MAC Group issues. City AR confirms considerations for potential evacuation and evacuation order.

Elected Officials: Through each Agency PIO or Liaison staff, elected officials will be contacted and kept informed of the situation during the Watch and Warning stages and provided with appropriate public messaging. If officials are in contact with affected constituents and receive pertinent information, they will convey that information to the MAC through PIO or Liaison staff.

G. MAC Group Contact Information

With the exception of elected officials, the City, District and other Agency Stakeholders will maintain a roster of who fills each role. Whoever is designated to fill these roles should consider alternate persons to account for vacation, sick leave, etc. When a MAC is convened, anyone filling these roles needs to provide contact information to City of San José Office of Emergency Management. Contact information would include office and mobile phone numbers, e-mail, and other pertinent data.

Within the City EOC, e-mail accounts will be provided that match the role the person is fulfilling. This will allow first shift responders to leave information for incoming staff. It also allows for a common repository for information.

H. Procedures

The Agency Stakeholders, if needed, may develop additional procedures, beyond what is provided herein.

For example, the District may choose to co-locate or assign a liaison to the City's Department of Public Works' and/or Department of Transportation's DOCs. This could facilitate better tracking of their personnel operating in the SJ area.

I. Communications

An emergency radio plan (ICS-215) shall be developed, along with the above-mentioned vMAC options.

The MEOC and certain other command vehicles have radio interoperability systems that can (1) communicate on just about any radio system and (2) can "patch" (link) disparate systems together.

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3. MOBILIZATION OF EAP

A. Progressive Triggers

This EAP is always active because preparedness is a year-round activity. Whether collaborating on flood awareness outreach before an event, responding to a flood event, recovering from an event, or planning for maintenance or improvements after the winter storm season, the need for the City, District and other Stakeholders to communicate and collaborate is important. Once a potential or actual event is detected, responding in a coordinated way and collaborating on post incident recovery follows a progression of activities/actions.

During high flows, creek conditions can change at a moment's notice and may vary significantly from anticipated. This is especially true for more natural creeks with trees and other vegetation or heavy sediment loads that could cause blockages. For example, flood flows may not be anticipated to reach channel capacity, yet flooding may occur due to changes in the channel condition.

Therefore, the level of activity will be guided by dynamic decision or educated judgment based on best information available to the Agency SMEs and AC. The level of activity may mirror those activities of the individual jurisdictional EOCs. As weather conditions merit and monitoring take place, the SMEs and AC may be in their home offices or jurisdiction's EOC, for the Monitoring stage. The "call to action" may be a series of phone calls among the SMEs and AC to determine the next steps. As conditions progress, City, District, or other Stakeholders are encouraged to convene at the designated MAC facility.

B. Notification

The City, District and other Stakeholders will initiate contact to the appropriate contacts, based on the prevailing weather conditions. This would include those who have a role to perform in the EAP, dispatch and open EOCs. For city responders, City Dispatch, Office of Emergency Management, or others trained in the Everbridge Notification System will initiate the contact and provide information. For the District, Emergency Services will initiate contact and provide the following information.

- Level of Activation
- Situation Status
- Requested Action
- Reporting Requirements

The prevailing conditions will identify whether additional notification or actions will need to take place outside of the designated Stakeholder contacts.

C. Responder Notification

As identified in the following status reporting charts, information from the FIT members deployed in the field, information flows into the Department Operations Center (DOC) or to EOC Operations/Planning & Intelligence. The DOC/EOC staff process the information, track the data, and provide the EOC Operations Section with information.

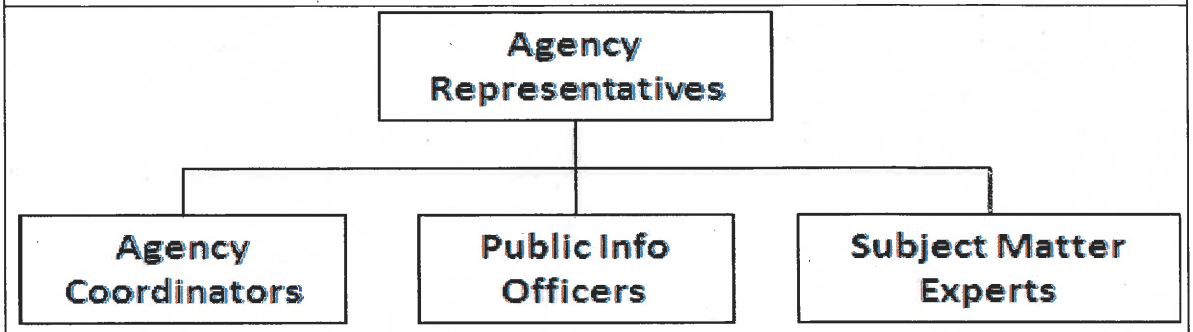
D. Reciprocal Notification

Regardless of activation status, if the City or District opens its EOC, the jurisdiction is encouraged to notify the other that they have activated their EOC. Notification can occur via Skype, phone or e-mail.

E. Public Warning

The City has trained city dispatch, OEM personnel and others to activate the Alert SCC and IPAWS systems. Following protocol, the PIO will generate the message, have it approved and the trained staff will activate the warning system. Other tools such as social media shall be used and monitored. The deployment of the IPAWS system will be evaluated for most effectiveness and mobilized.

Multi-Agency Coordination Information Flow
"Green" or "Preparedness": No predicted storm

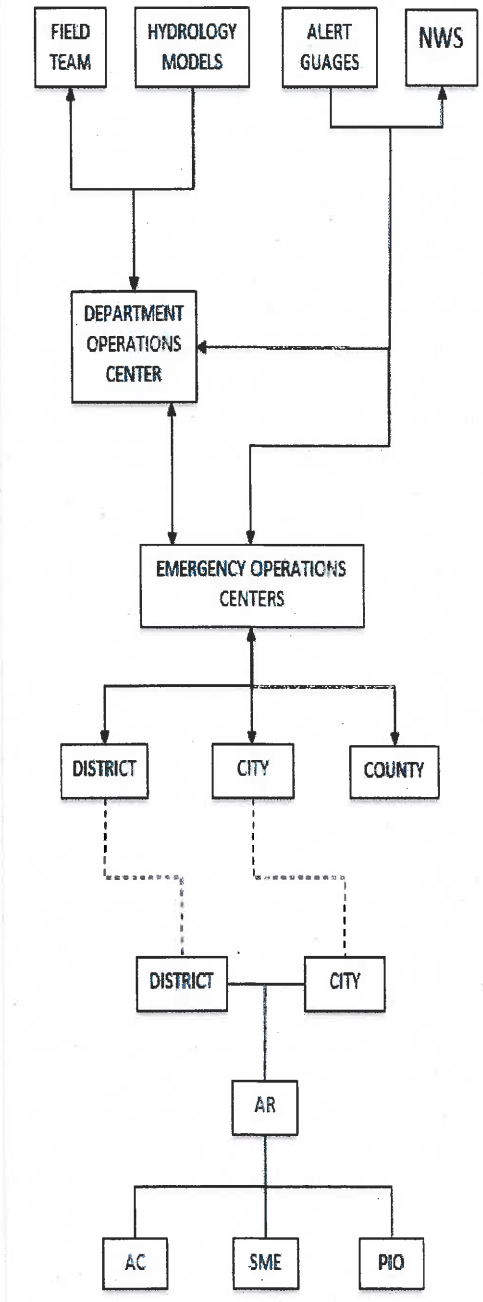


	Positions are jointly staffed by each involved agency		
Multi-Agency Coordination Group Roles	**City of San José**	**District**	**Others**
Subject Matter Expert			
Provide technical data on mitigation and preparedness measures	Public Works Transportation Environmental Services	Watersheds Operations & Maintenance Division Watersheds Stewardship & Planning Division Raw Water Operations & Maintenance Divisions	
Provide technical floodplain mapping expertise			
Maintain equipment, gauges, telemetry, communications systems, etc.			
Update plans and procedures for plans and activities that support the EAP			
Agency Coordinator			
Has direct access to Agency Representative or EOC Director of own agency	OEM Director Public Works Director Transportation Director PRNS Director Environmental Services Director Police Chief Fire Chief	Watersheds Operations & Maintenance Division Watersheds Stewardship & Planning Division Raw Water Operations & Maintenance Division	Designated staff from: Santa Clara County SJ Unified School District
Works with SMEs to collect information, develop plans of action, and identify resources required for preparedness effort			
Meets on regular basis with EAP agencies on preparedness matters			

	Implements respective parts of the EAP as either department lead or representative of activated Emergency Operations Center			
	Directs/redirects city resources as needed by priorities			
	City OEM in consultation with City EOC Director will determine need to activate to Yellow level			
Multi-Agency Coordination Group Roles		**City of San José**	**District**	**Others**
Public Information Officer				
	Provides direction and support on public education jointly with other agencies	Communications Officer E-PIO Team	Public Information Officer	Designated Public Information Officer
	Provides coordination to operate a Joint Information System or Center			
Agency Representative				
	Authorizes:	City Manager Assistant CM Deputy CM (EOC Director when EOC is activated)	Chief Operations Officer for: Administration Watershed Water Operations	County Administrative Officer San José Unified School District Superintendent
	Emergency Action Plan Preparedness Planning Mitigation Plans Budget and Resource Allocation			
	Meet Annually for plan review and agency coordination			
	May delegate authorities to Agency Coordinator			

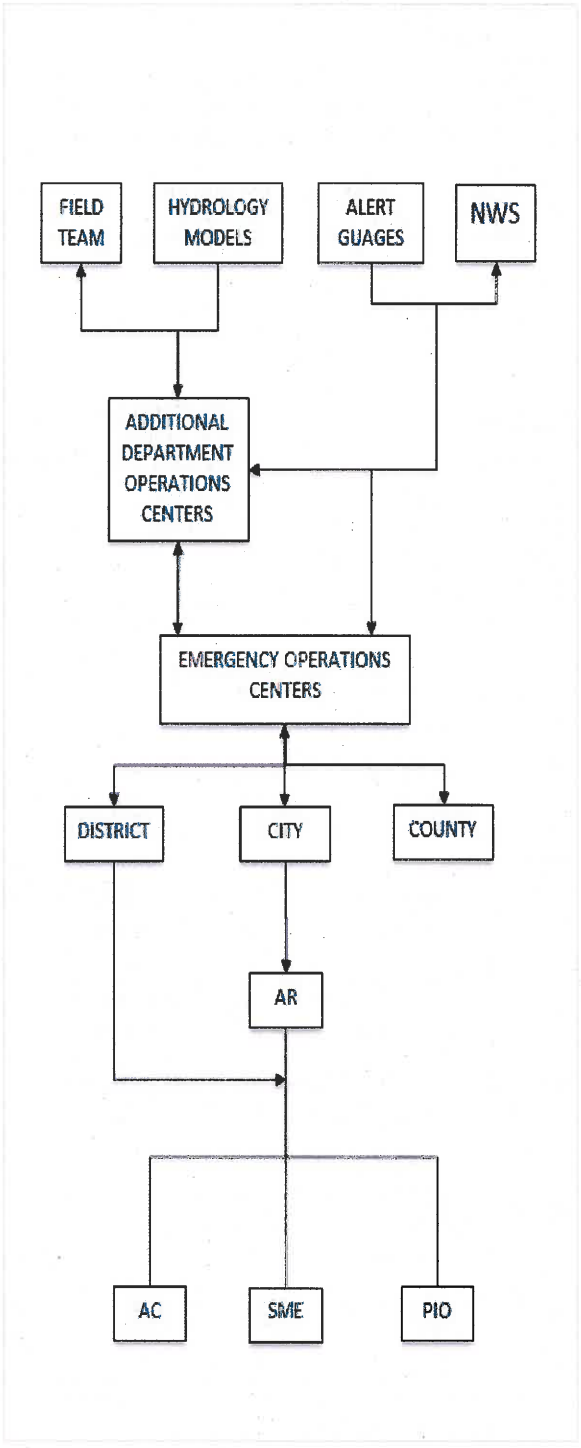
Multi-Agency Coordination Information Flow
"Yellow" or "Monitoring": Flood stage within 72 hours plus, or depths are at 50% to 70% of flood stage

Data Collection Efforts	
Data Sources	Field Teams
	City and District deploy independent units Teams either provide visual information on the levels of the creeks or respond to storm drain demands City and District coordinate deployments
	Hydraulic Modeling is managed real time by District
	ALERT Gauge data is displayed on line available to DOC and EOC
	National Weather Service provides routine updates available to DOC and EOC
Department Operations Center (DOC)	
Data Assessment	District will activate a DOC or District Control Center upon rainfall and projection
	City will activate DOC(s) upon deployment of Field Teams and projected weather
	Staffing will depend on storm severity
	City DOC communicates with virtual or present EOC or OEM staff
Emergency Operations Center (EOC)	
Coordination and Collaboration	City, District and County may partially activate individual EOCs to monitor conditions
	Staffing level at start may be a few to track incident and progress to more staff as predicted storms increase.
	City EOC Director, after consult with OEM/EOC Staff, determines level of activation of Orange level
	City EOC Director determines if a MAC is needed; identifies need for virtual MAC or in person
Multi Agency Coordination (MAC) Group	
Enhance Coordination	City EOC Director sets physical MAC schedule of meetings and requests District staffing
	District staffing may be requested to fulfill Subject Matter Expert needs, Agency Coordinator, and or Agency Representative role
	District responds according to demands and sends at least Agency Coordinator who has immediate access directly to Agency Representative
	When activated designated MAC Staff complete responsibilities and tasks identified in this EAP



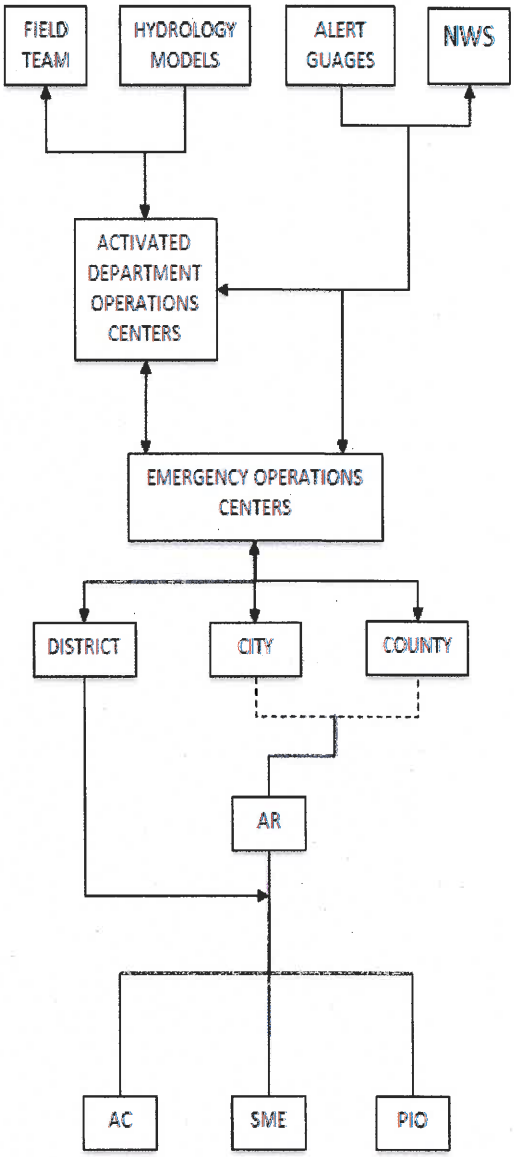
Multi-Agency Coordination Information Flow
"Orange" or "Watch": Flooding within 24 to 72 hours or measured depths are at 70% to 100% of flood stage

Data Streams	
Data Sources	Field Teams
	City and District continue field response and observation Follow field operations plan
	Hydraulic Modeling is managed real time by District
	ALERT Gauge data is displayed on line available to DOC and EOC
	National Weather Service provides routine updates available to DOC and EOC
Department Operations Center (DOC)	
Data Assessment	District may operate a DOC or District Control Center upon rainfall and projection
	City maintains DOC(s) activated in Yellow and add DOC for PRNS, Police and Fire
	Staffing will depend on storm severity
	Reporting to agency EOC will notably increase to ensure coordinated response
Emergency Operations Center (EOC)	
Coordinate and Collaborate	City, District and County will have activated individual EOCs to coordinate response to conditions
	City EOC Director after consult with EOC Staff determine level of activation of Red level
	City EOC Director determines calls for MAC if not already activated; requests appropriate staffing
Multi Agency Coordination (MAC) Group	
Enhance Coordination	City EOC Director sets physical MAC schedule of meetings and requests District staffing at City EOC
	District requested to fulfill Subject Matter Expert needs, Agency Coordinator activity, and or Agency Representative role
	District responds according to demands and sends as a minimum, an Agency Coordinator who access directly to Agency Representative
	If MAC staffing response is impeded by demands on multiple water ways, City EOC Director may request MAC at the County
	When activated designated MAC Staff complete responsibilities and tasks identified in this EAP



Multi-Agency Coordination Information Flow
"Red" or "Warning": Flood stage is estimated to occur within 24 hours.

Data Streams	
Data Sources	Field Teams
	City and District continue field response and observation
	Hydraulic Modeling is managed by District
	ALERT Gauge data is displayed on line available to DOC and EOC
	National Weather Service provides routine updates available to DOC and EOC
Department Operations Center (DOC)	
Data Assessment	District may operate a District Control Center upon rainfall and projection
	City maintains DOC(s) activated in Orange and add DOC for PRNS, Police and Fire
	Staffing will depend on storm severity
	Report frequency to agency EOC will notably increase to ensure coordinated response
Emergency Operations Center (EOC)	
Coordinate and Collaborate	City, District and County will have activated individual EOCs to coordinate response to conditions
	City EOC Director after consult with EOC Staff determine evacuation areas and shelter support
	City EOC Director determines involvement of MAC
Multi Agency Coordination (MAC) Group	
Enhance Coordination	City EOC Director sets physical MAC schedule of meetings and requests District staffing at City EOC
	District requested to fulfill Subject Matter Expert needs, Agency Coordinator activity, and or Agency Representative role
	District responds according to demands and sends as a minimum, an Agency Coordinator who has direct access to Agency Representative
	City EOC Director identifies how MAC will be engaged in Recovery



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4. EAP OBJECTIVES AND FUNCTIONS

The City, District and other Stakeholders will focus on the following Objectives, Capabilities, and Functions. The following is consistent with the concepts of the National Incident Management System (NIMS) from the Federal Emergency Management Agency (FEMA) and the Standardized Emergency Management System (SEMS) from the State of California Office of Emergency Services (CalOES).

A. Objectives

The following objectives are in alignment with the purpose of this EAP to coordinate the interagency response, resource management and recovery operations; and to collaborate on public messaging.

- **Objective 1: Identify Conditions, Actions, and Needs**
  - Core Capability: Situational Awareness
- **Objective 2: Notification of Involved Agencies**
  - Core Capability: Activation; Coordination
- **Objective 3: Emergency Public Information**
  - Core Capability: Public Information Officer (PIO) Collaboration in communications
- **Objective 4: Warning**
  - Core Capability: Public Warning
- **Objective 5: Coordination of Field Operations; Resource Sharing**
  - Core Capability: Personnel Accountability; Mutual Aid; Tracking; Finance Issues

B. Functions

In keeping with the concepts of SEMS and NIMS, utilizing common functions to maintain the orderly flow of information and responsibility between agencies is important. Consistency in utilizing the SEMS Functions in an activation, similar to those in an EOC, improves the organization and communication flow. They are listed below in the order of when they would be called upon during the progression of the EAP:

- Planning and Intelligence
- Operations Coordination
- Emergency Public Information
- Logistics and Resource Management
- Management

Planning/Intelligence

As with any emergency, it can take some time for an agency to (1) ascertain what has happened, (2) what is likely to happen, and (3) what areas and/or systems are affected. The SEMS and NIMS function of Planning/Intelligence helps gather and shape the information needs.

Documentation

All activity and actions will be documented as best as possible through the use of the ICS Unit Log 214, as a minimum, and other forms available at the EOC Facility. The use of status boards is encouraged and will be adapted from available resources.

Situation Status

The SMEs consolidate all intelligence and create Situational Awareness (SA) regarding weather forecasts, damage assessments, flooding reports, traffic conditions, etc. This is accomplished through reports, documentation on the City EOC status boards and maps, and conveyed through an Action Plan (AP). The AP may be verbal at the Monitoring stage. When the City EOC is activated for a MAC, the AP will be written.

Agency and Resource Status

Determining what agencies have accomplished and what they may need includes identifying what personnel and resources have been deployed, the prevailing condition, the need for mutual aid, and tracking other resource demands or similar requests.

Notification

The Planning/Intelligence activities accomplished by the SMEs lead to the appropriate notification of Stakeholders as described in Section 3, Mobilization of EAP, and are accomplished by the City.

Operations Coordination

- Activities and actions required for responding to and mitigating flood events are reported by FIT teams to the respective DOC.
- The appropriate DOC will monitor respective FIT teams. The DOC will provide operational updates to the appropriate City EOC Operations Section personnel.
- Critical life safety concerns in the field may be directly relayed from the field to the EOC as needed.

Emergency Public Information

As the event unfolds there is a constant need of notifying the public of conditions and what to do. The Public Information Officers (PIO) are responsible for identifying with whom to communicate, creating the message, and specifying the format and method of communication to deliver the message public and stakeholders.

The PIOs from each agency will follow the checklists and responsibilities identified in the jurisdiction's EOP. This EAP does not change that responsibility or override the tasks outlined in the plan. The purpose is to coordinate the Public Affairs and/or designated Public Information Officers (PIOs) from each agency to create a common message to avoid confusing the public, which can occur when each of the agencies sends out disparate messages.

Warning

As part of the Emergency Public Information and Warning Core Capability comes the need to let the public know to prepare for the expected impacts of imminent flooding. This is accomplished through use of the Alert SCC, IPAWS, and deployment of LRADs. Door to door contact with volunteers or employees will also be employed.

Special attention to multi-lingual or mono-lingual needs will be considered.

The PIOS should consider the activation of mutual aid and establishment of a Joint Information System (JIS) or Joint Information Center (JIC).

Logistics and Resource Management

As the incident unfolds and resources respond to the prevailing conditions, skilled or scarce resources will be tapped-out and require backfill, replacement or additional support. The support can come in the form of mutual aid assistance, contractors, vendors, or other sources. Resource requests will be noted and coordinated as much as possible through the EOCs or DOCs. The method of request, including the form, will be coordinated with the Agency fulfilling the need. If resources cannot be met by local Agency Stakeholders, a request for assistance can be sent to the Santa Clara County Operational Area.

Reimbursement

As resources from one Agency are shared with another Agency, the use of equipment, personnel or other resources may be reimbursable, based upon agreement.

Management

As conditions warrant or progress, the City, District and other Stakeholders Authorized Representatives by definition have the ability to make policy decisions, including those on matters of cost and/or liability. The City, District and other Stakeholders may confer on:

- Critical conditions
- Agency priority responses
- Common resource needs

- Resource request processing
- Managing any conflicting policy issues

C. Progression

The checklists in the Attachments demonstrate how the City, District and other Stakeholders Functions grow from Pre-Incident Preparedness to Monitoring, Watch, and Warning. The overall change in level of participation, number of participants, and staffing needs is incident specific, because not all potential or actual incidents are the same.

Attachment 1

Confidential Staff Information

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Attachment 2

Web-based Data Sources

- https://gis.valleywater.org/SCVWDFloodWatch/
- http://valleywater.org/
- http://www.valleywater.org/Services/FloodProtectionResources.aspx
- https://gis.valleywater.org/alert/
- http://alert.valleywater.org/
- http://www.valleywater.org/sandbags/
- http://www.valleywater.org/Services/FloodSafetyTips.aspx
- http://water.weather.gov/ahps2/index.php?wfo=mtr
- http://water.weather.gov/ahps2/forecasts.php?wfo=mtr
- http://www.sanjoseca.gov/index.aspx?NID=539
- http://www.sanjoseca.gov/index.aspx?NID=1408

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Attachment 3

Subject Matter Experts Action List

Purpose:

- Provide hydrological, geological and water way estimated assessments.
- Provide expertise on flood fight operations and estimated impacts on critical infrastructure including utilities and transportation.

Who designated:

City	District and Other Stakeholders
Public Works Transportation	Watersheds Operations & Maintenance Division Watersheds Stewardship & Planning Division Raw Water Operations & Maintenance Division

Actions:

	Responsibility/Activity	Stakeholder
Preparedness		
	Provide technical data on mitigation and preparedness measures.	Each Stakeholder is lead for own agency resources.
	Conduct field inspections of creeks and facilities	Each parcel owner is lead in own right of way.
	Jointly discuss property management needs and plans	Each parcel owner is responsible.
	Perform mitigation work to reduce flood risk	Each Stakeholder is lead on own property. By agreement can release to others.
	Provide technical floodplain mapping expertise	District is lead.
	Maintain equipment, gauges, telemetry, communications systems, etc.	District lead for stream gauges and District equipment. City lead for city equipment.
	Develop and maintain computer models of watersheds and creeks	District is lead.
	Participate in winter preparedness workshop	District is lead.

	Responsibility/Activity	Stakeholder
	Participate in annual EAP review/exercise/updates; ensure plan is functional and up to date	City is lead.
	Manage flood information websites	Each Stakeholder manages own site; points to Water District for flow.
Monitoring		
	Notify staff of own agency about the increased condition level	Each Stakeholder is lead for their staff.
	Conduct formal monitoring, communicate via virtual systems; communicate with Agency Coordinators to determine next level of activation.	Each Stakeholder is lead for own agency resources.
	Communicate risk to EOC/MAC representatives	Each Stakeholder is lead within their agency.
	Report to designated MAC facility when directed, and available	Each Stakeholder responds to designated MAC facility.
	Review evacuation planning needs	City is lead.
Watch		
	Communicate risk to EOC/MAC representatives	Each Stakeholder is lead within their agency.
	Notify staff of own agency about the increased condition level	Each Stakeholder is lead for own agency.
	Provide information to and from respective EOCs, including status reports and briefings	Each Stakeholder is lead.
	Report to designated MAC facility when directed, as available	District is lead.
Warning		
	Report to designated MAC facility when directed, if not already done	District is lead.
	Communicate risk to EOC/MAC representatives	Each Stakeholder is lead within their agency.

* If only one Stakeholder is noted as lead, all other Stakeholders support the effort.

Attachment 4

Agency Coordinators Action List

- Agency Coordinators are designated Agency Stakeholder staff who may normally be assigned roles in an EOC Management or Operations Section.
- Agency Coordinators should have authority to recommend actions or updates to plans.

Purpose:

- Agency Coordinator primary role is to coordinate actions between the Stakeholders to resolve questions on response and assign resources from their respective agency for comprehensive support to the storm condition.

Who designated:

City	District and Other Owners
EOC Operations Section staff for: • Public Works • Transportation • Utilities • Police • Fire • Parks, Recreation and Neighborhood Services • Emergency Management	• Watersheds Operations & Maintenance Division • Watersheds Stewardship & Planning Division • Raw Water Operations & Maintenance Division

Actions:

	Responsibility/Activity	Stakeholder*
Preparedness		
	Provide technical data on mitigation and preparedness measures.	Each Stakeholder is lead for own agency resources.
	Jointly discuss property management needs and plans	Each parcel owner is responsible.
	Inventory and Procure Flood Fighting Materials and Equipment	Each Stakeholder is lead for own materials and equipment.
	Involve FEMA Floodplain Manager who maintains the National Flood Insurance Program (NFIP) Community Rating System (CRS) certification	City is lead.
	Implement and enforce building codes for building in floodplains	City is lead.
	Participate in winter preparedness workshop	District is lead.
	Participate in annual EAP review/exercise/updates; ensure plan is functional and up to date	City is lead.

	Responsibility/Activity	Stakeholder*
	Update EAP and Contact/Roles list and provide revisions to Stakeholders	City is lead.
	Update Emergency Communications Plan and notification systems	City is lead. County is key support for warning.
Monitoring		
	Notify staff of own agency about the increased condition level	Each Stakeholder is lead for their staff.
	Communicate risk to EOC/MAC representatives	Each Stakeholder is lead within their agency.
	Respond to and mitigate minor events as needed; coordinate with each responding agency	Each Stakeholder is lead for own materials and equipment.
	Stage equipment at localities likely to be affected as needed; coordinated with each responding agency	Each Stakeholder is lead for own materials and equipment.
	Report to designated MAC facility when directed, and available	Each Stakeholder responds to designated MAC facility.
	Confer with EOC Director on conditions for activating next level	City is lead.
	Confer with EOC Director for activation of a MAC	City is lead.
	Identify location for flood fighting resources for the public (e.g,. sandbag locations)	District is lead.
	Review evacuation planning needs	City is lead.
Watch		
	Manage information from the Department Operations Center	Each Stakeholder is lead within their agency.
	Allow the DOC to manage field response	Each Stakeholder is lead within agency resources
	Notify staff of own agency about the increased condition level	Each Stakeholder is lead for own agency.
	Confer with responding Agency Coordinators to determine response coordination needs and resources needs	Each Stakeholder is equally responsible for cross coordination.
	Respond to and mitigate minor events as needed; coordinate with each responding agency	Each Stakeholder is lead for own materials and equipment.
	Stage equipment at localities likely to be affected as needed; coordinated with each responding agency	Each Stakeholder is lead for own materials and equipment.
	Update location for flood fighting resources for the public and supply additional resources as needed (e.g., sandbag locations)	District is lead.

	Responsibility/Activity	Stakeholder*
	Deploy LRAD and activate public notification as appropriate	City is lead.
	Provide information on impact and available resources to and from respective EOCs	Each Stakeholder is lead for own agency resources
	Provide information to and from respective EOCs, including status reports and briefings	Each Stakeholder is lead.
	Confer with EOC Director for activation of a MAC	City is lead.
	Report to designated MAC facility when directed, as available	District is lead.
	Confer with EOC Director on conditions for potential evacuation and shelter support	City EOC Staff are lead.
Warning		
	Report to designated MAC facility when directed, if not already done	District is lead.
	Implement evacuation plans and deploy resources to evacuate	City is lead.
	Coordinate resources through respective EOCs	Each Stakeholder is lead for own resources.

* If only one Stakeholder is noted as lead, all other Stakeholders support the effort.

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Attachment 5

Public Information Officer Action List

Purpose:

- Provide public communications before, during and after a flood emergency.
- Prepare and coordinate public message between agencies
- Provide public notification.

Who designated:

City	District and Other Stakeholders
Communications Director	External Affairs
Designated city reps	Office of Communications

Actions:

	Responsibility/Activity	Stakeholder
Preparedness		
	Participate in winter preparedness workshop	District is lead.
	Participate in annual EAP review/exercise/updates; ensure plan is functional and up to date	City is lead.
	Update EAP and Contact/Roles list and provide revisions to Stakeholders	City is lead.
	Publish Preparedness Public Outreach (e.g., Winter Preparedness)	District is lead.
	Provide public education	Each Stakeholder is lead for own agency resources
	Update Emergency Communications Plan and notification systems	City is lead. County is key support for warning.
Monitoring		
	Notify staff of own agency about the increased condition level	Each Stakeholder is lead for their staff.
	Report to designated MAC facility when directed, and available	Each Stakeholder responds to designated MAC facility.
	Provide public education	Each Stakeholder collaborates and is lead to their constituents.

	Responsibility/Activity	Stakeholder
	Provide information to Elected Officials	Each Stakeholder is lead for own agency.
Watch		
	Notify staff of own agency about the increased condition level	Each Stakeholder is lead for own agency.
	Provide public information in multiple languages	Each Stakeholder collaborates and is lead to their constituents.
	Provide public warning in multiple languages	City is lead. County is key support.
	Deploy LRAD and activate public notification as appropriate	City is lead.
	Provide information to Elected Officials	Each Stakeholder is lead for own agency.
	Activate JIS/JIC as appropriate	City is lead.
	Communicate with media as needed	Each Stakeholder is lead for own agency.
	Report to designated MAC facility when directed, as available	District is lead.
Warning		
	Report to designated MAC facility when directed, if not already done	District is lead.
	Provide public information in multiple languages	Each Stakeholder collaborates and is lead to their constituents.
	Provide public warning and shelter information in multiple languages	City is lead. County is key support.
	Activate JIS/JIC as appropriate to jointly communicate with media	City is lead.
	Coordinate resources through respective EOCs	Each Stakeholder is lead for own resources.

* If only one Stakeholder is noted as lead, all other Stakeholders support the effort.

PUBLIC COMMUNICATIONS: MONITORIING

Monitoring

CONDITIONS:

- **Water level in creek is higher than usual.**
- **Reservoir is nearly full.**
- **City staff are evaluating at-risk areas.**

MESSAGE:	Spanish:	Vietnamese:
Be alert and tell your neighbors to be alert. Flooding is possible. The Creek water level is higher than usual. Stay tuned to news channels. **Plan ahead If the risk of flooding increases:** ▪ Know your sandbag locations ▪ Know where to move your car ▪ Know which possessions you might need to move to a higher place ▪ Consider alternative places to stay **If you are a senior or handicapped:** Contact family, friends or neighbors NOW to alert them to your possible need for assistance in case the risk of flooding increases.		

CHANNELS, DELIVERY METHODS & SPECIAL POPULATIONS:

1. ALERT SCC and IPAWS if warranted.
2. MEDIA NEWS RELEASE including ethnic media
3. RADIO & TV STATIONS – Provide specific broadcast information
4. SOCIAL MEDIA: Post message to NEXTDOOR, FACEBOOK, TWITTER, CITY WEBSITE
5. HOMELESS ENCAMPMENTS: XX to walk encampments and share above warnings.
   Contact and provide downloadable flyer:
6. Inform administrators at SCHOOLS, CHURCHES, SJSU, SCOUT TROOPS IN FLOOD ZONE
7. Contact managers at MOBILE HOME PARK OFFICES
8. Contact leaders at Chamber of Commerce, Downtown Association to engage BUSINESS DISTRICT

PUBLIC COMMUNICATIONS: WATCH

Watch

CONDITIONS:

- **Water level in creek is rising.**
- **The City Emergency Operations Center is activated.**
- **Shelters are activated.**

MESSAGE:	Spanish:	Vietnamese:
Be prepared and tell your neighbors to be prepared to evacuate if needed. Flooding is likely in the next 24 to 72 hours. The Creek water level is rising. Stay tuned to news channels. **Be ready to evacuate if necessary:** ▪ Protect your property with sandbags ▪ Know where you would move your car ▪ Move important items to higher locations ▪ Pack a bag with clothes, medicines and important documents ▪ Have an alternative place to stay **If you are a senior or handicapped:** Contact family, friends or neighbors NOW to pick you up.		

CHANNELS, DELIVERY METHODS & SPECIAL POPULATIONS:

1. INFORM COUNCIL AND BOARD OFFICES, THEN ISSUE ALERT SCC and IPAWS – Issue flood warnings
2. LRAD or PUBLIC ADDRESS
3. MEDIA NEWS RELEASE including ethnic media
4. RADIO & TV STATIONS – Provide specific broadcast information
5. SOCIAL MEDIA: Post message to NEXTDOOR, FACEBOOK, TWITTER, CITY WEBSITE
6. HOMELESS ENCAMPMENTS: XX to walk encampments and share above warnings.
   Contact and provide downloadable flyer:
7. Inform administrators at SCHOOLS, CHURCHES, SJSU, SCOUT TROOPS IN FLOOD ZONE
8. Contact managers at MOBILE HOME PARK OFFICES
9. Contact leaders at Chamber of Commerce, Downtown Association to engage BUSINESS DISTRICT
10. Place SANDWICH BOARD SIGNS ON MAJOR CORNERS: **Be alert to the likelihood of flooding in 24-72 hours.**
11. KNOCK-AND-TALK in at-risk neighborhoods. Staff prepared with numbers to call and basic info if asked.

PUBLIC COMMUNICATIONS – WARNING

Warning

CONDITIONS:

- **Water level in Creek is rapidly rising and flooding is imminent.**

MESSAGE:	Spanish:	Vietnamese:
A flood is coming. Calmly evacuate now. Tell your neighbors to evacuate. Stay tuned to news channels. ▪ Pack a bag with clothes, medicines and important documents ▪ Move your car. ▪ Go to a City Shelter if you have no alternative place to stay. ▪ Pets may be taken to the San José Animal Shelter for a safe stay during disaster. **If you are a senior or handicapped:** Contact family, friends or neighbors NOW to pick you up.		

CHANNELS, DELIVERY METHODS & SPECIAL POPULATIONS:

1. INFORM COUNCIL AND BOARD OFFICES, ISSUE ALERT SCC and IPAWS – Issue flood warnings
2. LRAD or PUBLIC ADDRESS
3. MEDIA NEWS RELEASE including ethnic media
4. RADIO & TV STATIONS – Provide specific broadcast information
5. SOCIAL MEDIA: Post message to NEXTDOOR, FACEBOOK, TWITTER, CITY WEBSITE
6. HOMELESS ENCAMPMENTS: XX to walk encampments and help transport people.
   Contact and provide downloadable flyer:
7. Inform administrators at SCHOOLS, CHURCHES, SJSU, SCOUT TROOPS IN FLOOD ZONE
8. Contact managers at MOBILE HOME PARK OFFICES
9. Contact leaders at Chamber of Commerce, Downtown Association to engage BUSINESS DISTRICT
10. Place SANDWICH BOARD SIGNS ON MAJOR CORNERS/ENTRANCES in at-risk areas: **Mandatory Flood Evacuation is Underway.**
11. Implement NO PARKING zones.

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Attachment 6

Agency Representative Action List

Purpose:

- Direct actions to facilitate the EAP.
- Re-allocate agency resources to address EAP as needed.
- Provide directives and affect emergency orders.
- City AR makes final decision on the level of activation of the EAP and on evacuation order.

Who designated:

City

- City Manager
- Assistant City Manager
- Deputy City Manager

District and Other Owners

- Chief Operating Officer
  - Administration
  - Watershed
  - Water Utility

Actions:

	Responsibility/Activity	Stakeholder*
Preparedness		
	Participate in winter preparedness workshop	District is lead.
	Participate in annual EAP review/exercise/updates; ensure plan is functional and up to date	City is lead.
	Update EAP and Contact/Roles list and provide revisions to Stakeholders	City is lead.
	Provide resources to support on-going activity to support this EAP and mitigation efforts along waterways	Each Stakeholder is lead for own agency resources.
Monitoring		
	Activate the EAP for "Monitoring"	City is lead.
	Determine level of EOC staffing after consult with OEM	City is lead.
	Report to designated MAC facility when directed, and available	Each Stakeholder responds to designated MAC facility.
	Provide public education	Each Stakeholder collaborates and is lead to their constituents.
	Provide information to Elected Officials	Each Stakeholder is lead for own agency.
	Identify conditions for activating next level after consult with OEM	City is lead.

	Responsibility/Activity	Stakeholder*
	Determine need for activation of a MAC	City is lead.
Watch		
	Activate the EAP for "Watch"	City is lead.
	Allow the DOC to manage field response	Each Stakeholder is lead within agency resources
	Provide information on impact and available resources to and from respective EOCs	Each Stakeholder is lead for own agency resources
	Report to designated MAC facility when directed, as available	District is lead.
	Confer with EOC Director on conditions for activating next level	City is lead.
	Confer with legal staff on process for proclaiming a Local Emergency	City EOC Director is lead.
Warning		
	Activate the EAP for "Warning"	City is lead.
	Report to designated MAC facility when directed, if not already done	District is lead.
	Provide public warning and shelter information in multiple languages	City is lead. County is key support.
	Implement evacuation plans and deploy resources to evacuate	City is lead.
	Proclaim Local Emergency as appropriate	City EOC Director is lead.

* If only one Stakeholder is noted as lead, all other Stakeholders support the effort.

Attachment 7

Elected Officials Action List

Purpose:

- Coordinate with constituents.
- Check with respective EOC Director on conditions.
- Coordinate information through the Public Information Officer/Liaison.

Who designated:

City

- City Councilmember

District and Other Owners

- Board of Directors

Actions:

	Responsibility/Activity	Stakeholder*
Preparedness		
	Participate in winter preparedness workshop as requested	District is lead.
	Provide resources to support on-going activity to support this EAP and mitigation efforts along waterways	Each Stakeholder is lead for own agency resources.
Monitoring		
	Communicate with PIO personnel regarding situation and public/media messages	Each Stakeholder is lead for own agency resources.
	Respond to constituents	Each Stakeholder is lead for own agency resources.
	Report any constituent concerns or observations to PIO	Each Stakeholder is lead for own agency resources.
Watch		
	All Monitoring Responsibilities/Actions	Each Stakeholder is lead for own agency resources.
	Communicate with PIO at designated MAC facility for more detailed briefing when requested, as available	Each Stakeholder is lead.
Warning		
	Respond to media and constituents with agreed upon messages	Each Stakeholder is lead.
	Proclaim Local Emergency as appropriate	City is lead.
* If only one Stakeholder is noted as lead, all other Stakeholders support the effort.		

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APPENDIX A

Coyote Creek

Purpose: This Appendix to the City, District and other Stakeholders Joint Emergency Action Plan (EAP) for Severe Storms and Flooding is meant to provide additional guidance specific to Coyote Creek. It will not duplicate information already in an EOP or the EAP, but will provide Coyote Creek specifics for:

1. Incident detection
2. Evaluation and condition level classification
3. Notification and communications
4. Emergency actions

Coyote Creek Description: The Coyote watershed is located on the east side of Santa Clara County and encompasses an area of over 320 square miles, including three reservoirs located in the upper watershed areas. The watershed drains from south to north and includes the entire City of Milpitas, eastern portions of San José, portions of Morgan Hill and unincorporated lands within eastern Santa Clara County. Water flows into Coyote Creek through local drainage systems and through 29 tributaries, of which Upper Penitencia Creek, Berryessa Creek, Lower Silver Creek, Upper Silver Creek and Fisher Creek flow directly into Coyote Creek below the reservoirs.

Below the reservoirs, Coyote Creek is about 42 miles in length and is crossed by Highways 101 and 237, Interstates 880 & 280, Metcalf Road, Silver Creek Valley Road, Yerba Buena Road, Capitol Expressway, Tully Road, Story Road, East William Street, San Antonio Road, Santa Clara Street, Julian Street, Mabury Road, Berryessa Road, Oakland Road, Brokaw Road, Montague Road, and Tasman Drive.

About 32 miles of Coyote Creek is unimproved, much of it heavily vegetated, with a variety of adjacent land uses, such as, golf courses, open space, parks, residences and businesses. Over 5 miles of improvements were constructed in 1995 to protect North San José, Alviso, and Milpitas from a 100-year flood. In addition, a short section of levee and floodwall were constructed to provide about 25-year flood protection for the Golden Wheel and South Bay Mobile Home Parks downstream of Berryessa Road. And there have been other modifications that add up to about 5 miles of additional improvements.

Coyote Creek Flood Threats: The flood prone areas exist where the creek is in a more natural state, with significant vegetation, and are under a variety of ownerships that include a significant amount of private property. In the improved portions of the creek, there is a comprehensive management program to provide the design objectives of the modified creek. The unimproved areas of the creek do not have a comprehensive management program due to lack of: environmental clearances, public ownership, and a defined level of flood protection.

The two most recent flood events along Coyote Creek since the upstream reservoirs were constructed occurred in 1997 and 2017. Both of these floods primarily impacted 3 flood hotspots along the creek: (1) Golden Wheel and South Bay Mobile Home Parks downstream of

Berryessa Road; (2) A single family residential neighborhood near East William Street; and (3) A high density residential neighborhood in the Rock Springs Drive area downstream of Tully Road. These floods caused considerable damage requiring evacuations and demonstrated the inherent uncertainty in estimating flood flows in a natural stream system.

In addition to the three main hotspots, there are other locations that are considered flood hotspots. These areas are included in the Coyote Flood Thresholds & Condition Levels section.

Flood Event Detection: There are several detection methods that are described in the EAP that include weather forecasts, hydrologic/hydraulic modeling, Automated Local Evaluation in Real Time (ALERT) stream/reservoir/precipitation gauge systems, and field observation of stage gauges and other areas of high flow.

Of these methods, the gauging and field observation methods specific to Coyote Creek are described below.

ALERT Gauge System

A listing of all ALERT gauges in the Coyote Watershed can be found at http://alert.valleywater.org/sgi.php. These gauges provide data in near real-time at several locations on Coyote Creek and for all major tributaries downstream of the reservoirs. Upstream gauges will provide valuable information for flood events occurring downstream and may give many hours' notice to take action. Table 1 shows approximate travel times between key points along Coyote Creek.

The following is a summary of the current stream gauge program.

1. Annually sites will be prioritized for manual gauging and teams are assigned.

2. After every high flow event, the rule curves (depth versus discharge) are updated/calibrated. High flow calibration on Coyote Creek gauges was done after the 1997 event and again after the 2017 event.

3. ***The Madrone gauge is considered more accurate for predication downstream flood depths when Anderson reservoir spills due to the channel characteristics.*** The Edenvale gauge is sometimes used and is part of the NWS forecast modeling; however, it has a lower level of confidence due to potential backflow conditions.

Field Observations

Field observations can be critical to verify what is occurring because ALERT gauges are not always a reliable source of information and modeling information can vary from the actual condition. In addition, there are other known hot-spots and facilities that should be visually checked during high flows. Supplementing with visual observations from staff deployed in the field (i.e., Flood Information Teams) and other field reporting is an important component to detection.

To allow additional information to be accurately gathered, several visual stream stage monitoring locations have been installed for observations. These are located at:

Rock Springs:

Lookout location is driveway entrance to stables.

The 'circuit' for this monitoring station will include the entire Rock Springs area, including Bevin Brook Court.

East William Street:

Stage gauge installed on pedestrian bridge.

Lookout location will be from the vehicular bridge.

Circuit would include William Street Park, Selma Olinder Park, school, and surrounding neighborhood.

Maybury Street:

Stage gauge installed on middle pier of the bridge.

Lookout location on the northeast side.

Circuit would include Watson Park, City Yard, Trailer Park and Truck Driving School.

Berryessa Road:

Stage gauge installed on bridge pier.

Lookout location on north east side by trailhead.

Circuit would include Industry areas on west side of the creek and the Mobile Home Park.

Charcot Road:

Stage gauge installed on bridge pier.

Lookout location can be on either side of the creek.

Circuit would be the bridge location.

The District operates Field Information Teams (FITs) that are assigned to specific locations during storms and high flow events to provide this valuable information. In addition, the City also deploys FIT teams in a coordinated way to assure that all critical locations are being monitored. Locations of FIT deployment by the City and District may overlap during storm and flood events. The MAC Group will coordinate this effort through the Planning/Intelligence Section so that resources are most effectively utilized and information is shared.

District Hot-Spots for possible FIT deployment are:

1. Visual stream gauges – checking for high water and rate of change
2. Known Flood Hot-Spots

3. Real-time Flooding – documenting flooding
4. Bridge Piers – checking for debris blockages
5. Trash Racks – checking for debris blockages
6. Mobile Home Park Levee downstream of Berryessa Road. – check for stability
7. Sandbag sites – checking for supply and access issues
8. Previously repaired or other project sites – checking for performance
9. Raw water facilities – dams and canals

Coyote Flood Condition Levels and Severity: Sometimes an event is a flash flood that occurs suddenly without much early notice. However, with weather forecasting and Coyote Creek modeling there is often an ability to estimate flood events before they occur. This is extremely valuable to prepare for evacuations, if necessary.

To provide this advanced notice, a threat level will be used to provide an indicator of preparedness for a response and a level of potential severity for areas subject to flooding to assist the Agency's in planning and implementing appropriate actions. Because of the uncertainties of modeling in the future, a condition of Watch will be used when flood stage is estimated about 24 to 72 hours or more in the future. If flooding is estimated within about 24 hours, the threat level will be elevated to Warning.

Green	**Preparedness** - Flood stage is not estimated within the next 72 hours; and measured stream depth is below 50% of flood thresholds. By nature of a regular physical meeting between agency personnel from multiple agencies, a MAC is formed.
Yellow	**Monitoring** – Stream depth is estimated to reach flood stage in 72 hours plus, or the measured stream depth is 50% to 70% of flood stage. This condition is variable and requires more intense monitoring and a heightened level of alertness. Minimal staff in each Stakeholder's Emergency Operations Center (EOC) may be activated. A virtual MAC could be activated. An informal EOC Action Plan (AP) could be initiated.
Orange	**Watch** – Stream depth is estimated to reach flood stage within 24 to 72 hours or measured depths are at 70% to 100% of flood stage. The Stakeholders' would increase staff in their EOCs, if not yet activated, and a MAC facility could be established. A formal EOC AP will be drafted.
Red	**Warning** – This is an urgent situation when flood stage or greater is estimated to occur within 24 hours, or is occurring. The Stakeholders' EOC will have been activated and would be monitoring the situation, providing notifications and responding according to a written AP.

When the threat level is at a Watch or Warning, there is an expectation that flooding will occur or is occurring at some locations. The severity of the situation at specific locations is determined by the flood stage. The areas subject to flooding for of different stream stages are estimated utilizing hydraulic models and flood maps from the 1997 and 2017 floods.

Flood severity categories are defined by the NWS as:

Action	An established gauge height which when reached by a rising stream, lake, or reservoir represents the level where action is taken in preparation for possible significant hydrologic activity.
Minor Flooding	Minimal or no property damage, but possibly some public threat (e.g., inundation of roads).
Moderate Flooding	Some inundation of structures and roads near stream, evacuations of people and/or transfer of property to higher elevations.
Major Flooding	Extensive inundation of structures and roads, significant evacuations of people and/or transfer of property to higher elevations.

A 2017 flood inundation map of Coyote Creek is shown in **Figure 1** and the associated Flood Thresholds **Table 2** on the following page. The map is the Federal Emergency Management Agency (FEMA) 1% flood map. This map is based on the best available information and modeling when it was created and should be considered is approximate due to the difficulty in estimating an actual event and the changing conditions of the creek.

Table 3 is a flood severity table for the Madrone Gauge that is used to estimate areas that will be subject to flooding on Coyote Creek. By utilizing the **Table 1** for travel times and actual measurements at Madrone, the time for a flood flow to reach a given location can be estimated.

The flood stage can either be estimated by using weather forecasts to model stream depths at that location or may be based on actual measurements. This information would be used to establish threat levels for specific areas subject to flooding. Below are examples of how the tables will be used.

EXAMPLE 1 – If the stream depth at the Madrone gauge is at 5 feet, but is estimated to reach 10 feet in 24 hours, the threat condition would be **Flood Watch**, since it is 24 to 72 hours in the future, and the severity would be described as **Moderate Flooding**. The specific areas subject to flooding are described in Table 3 for 10-foot stage and below.

EXAMPLE 2 – If the stream depth at the Madrone gauge is currently measured at 13 feet, the threat condition in **Flood Warning**, since travel times shown on Table 1 to all flooding locations is less than 24 hours, and the severity is categorized as **Major Flooding** with areas subject to flooding described in Table 3.

EXAMPLE 3 – The stream gauge at William Street Bridge is observed to be at 23 feet. Using information from Table 2, the threat level would be **Flood Warning** for three low-lying structures on 17th Street along the creek bank.

With Table 2 for monitoring locations at flood prone areas, Table 1 to determine travel times, and Table 3 for flood severity based on the Madrone stream gauge, the threat, the severity of flooding, and often the time the flood can be expected and a flood prone area can be determined. The District and City will coordinate with the National Weather Service to be consistent in the threat level and severity category.

The figures and tables on the following pages identify flood thresholds and triggers for actions at the flood hotspots and for triggers based on the Madrone stream gauge.

Notifications and Activity/Actions: Based on the threat level and severity, notification activity/actions will be taken by both the City, District and other Stakeholders. The level of activity will be guided by dynamic decision or educated judgement based on the best information available to the Agency Subject Matter Experts (SMEs) and Agency Coordinators (ACs). The level of activity may mirror those activities of the individual jurisdictional Emergency Operations Centers (EOCs). As weather conditions merit and monitoring take place, the SMEs and ACs may be in their home offices or their jurisdiction's EOC, if activated. The "call to action" may be a series of phone calls among the SMEs and ACs to determine the best approach to coordination.

The following are tables providing guidance on the types of notifications and actions that should take place for Coyote Creek.

INFRASTRUCTURE AT RISK

The facilities below are within the area where people, property, and infrastructure may be at risk:

FACILITY TYPE	NAME	ADDRESS	PHONE
SCHOOL	Olinder Elementary School San José Unified School District	890 E. William St., San José, 95116	408-535-6000
	McKinley Elementary School Franklin-McKinley School District	651 Macredes Ave., San José, 95116	408-283-6000
	San José High School San José Unified School District	275 N. 24th St., San José, 95116	408-535-6000
	Empire Gardens Elementary School San José Unified School District	1060 E. Empire St., San José, 95112	408-535-6000
UTILITIES	PG&E Metcalf Transmission Substation	150 Metcalf Rd., San José 95138	1-800-743-5000
OTHER	Hibbit's Family Stables	1896 Senter Rd, San José, 95112	408-998-2872 or 408-478-9182

Table 1A: Coyote Creek Travel Times

Estimated Peak Travel Times for 2017 February Flood Event, rounded to the nearest half hour											
	Madrone Gauge (Anderson Spillway)	Coyote Creek Golf Drive	Edenvale Gauge	Singleton Rd. Crossing	Tully Road	Rock Springs	E. William St.	Watson Park	Berryessa Rd.	South Bay MHP	Charcot Road
Madrone Gauge (Anderson Spillway)	-	-	-	-	-	-	-	-	-	-	-
Coyote Creek Golf Dr.	4:00	-	-	-	-	-	-	-	-	-	-
Edenvale Gauge	5:30	1:30	-	-	-	-	-	-	-	-	-
Singleton Rd. Crossing	8:00	4:00	2:30	-	-	-	-	-	-	-	-
Tully Road	10:00	6:00	4:30	2:00	-	-	-	-	-	-	-
Rock Springs	10:30	6:30	5:00	2:30	0:30	-	-	-	-	-	-
East William Street	13:00	9:00	7:30	5:00	3:00	2:30	-	-	-	-	-
Watson Park	15:00	11:00	9:30	7:00	5:00	4:30	2:00	-	-	-	-
Berryessa Road	15:30	11:30	10:00	7:30	5:30	5:00	2:30	0:30	-	-	-
South Bay MHP	16:00	12:00	10:30	8:00	6:00	5:30	3:00	1:00	0:30	-	-
Charcot Road	17:00	13:00	11:30	9:00	7:00	6:30	4:00	2:00	1:30	1:00	-
Highway 237 USGS gauge	17:30	13:30	12:00	9:30	7:30	7:00	4:30	2:30	2:00	1:30	0:30

Disclaimer: The peak travel times in this table are based on data collected during the February 2017 flood event. Flood may happen before flow peaks. The data may be preliminary and should be used for general analysis purposes. Use care while interpreting results.

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Figure 1A:


Coyote Creek
Flooding Locations and Monitoring Stations
Coyote Creek
San Jose
Monitoring Station
Flooding Location
2017 Floodplain
5,000
Feet
N
The 2017 floodplain map is based on an aerial photo taken shortly after the 2017 storm event. The floodplain map may be preliminary and should be used for illustration and general analysis purposes. Use care while interpreting results.
GIS themes are for illustration and general analysis purposes only and are not accurate to surveying or engineering standards. Information is not guaranteed to be accurate, current, or complete and use of this information is your responsibility.

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TABLE 2A. Coyote Creek Flood On-Site Monitoring Thresholds

ID#	Index Location	Flooding Description	FLOOD THREAT STAGE AT MONITORING LOCATION				MONITORING LOCATIONS	PHOTO
			50% Capacity	70% Capacity	100% Capacity	2017 Flood High Water Mark		
1a	Charcot	Charcot Bridge overtops, flooding in streets and eventually threatening nearby businesses.	14 to 15	16 to 17	18 to 19	18.9	Charcot Road Bridge	
2a	Downstream Berryessa Rd - Industrial	Businesses west of Coyote Creek floods. Automotive junkyard and concrete plant at risk.	5 to 6	6 to 7	8 to 9	16.1	Berryessa Road Bridge	
2b	Upstream Berryessa Rd - Industrial	Industrial area west of Coyote Creek floods threatening businesses.	10 to 11	12 to13	13 to 14			
2c	Mobile Home Parks	Levee to the west of Coyote Creek overtops, flooding streets and homes. Businesses near the railroad tracks at risk.	12 to 13	14 to 15	15 to 16			

Appendix A – Coyote Creek

ID#	Index Location	Flooding Description	FLOOD THREAT STAGE AT MONITORING LOCATION				MONITORING LOCATIONS	PHOTO
			50% Capacity	70% Capacity	100% Capacity	2017 Flood High Water Mark		
3a	Watson Park	Dog park begins to flood first, followed by the Watson Park.	12 to 13	13 to 14	15 to 16	22.0	Maybury Road Bridge	
3b	RV Storage Lot	RV Lot west of Coyote Creek flooded.	13 to 14	16 to 17	18 to 19			
3c	Watson Park Neighborhood	Streets immediately to the west of Watson park begin to flood.	15 to 16	18 to 19	20 to 21			
3d	CSJ Mabury Yard	Coyote Creek overtops the east bank, flooding the city of San José Yard.	17 to 18	19 to 20	22 to 23			

Appendix A – Coyote Creek

ID#	Index Location	Flooding Description	FLOOD THREAT STAGE AT MONITORING LOCATION				MONITORING LOCATIONS	PHOTO
			50% Capacity	70% Capacity	100% Capacity	2017 Flood High Water Mark		
4a	17th Street - Lowest Homes	Three low-lying structures begin to flood.	15 to16	18 to 19	20 to 21	33.3	William Street Bridge	
4b	Selma Park	Park east of Coyote Creek begins to flood.	18 to 19	21 to 22	24 to 25			
4c	17th St & Arroyo Way	Several low-lying homes located very near the Creek on the west side begin to flood.	19 to 20	22 to 23	25 to 26			
4d	William Street Park	Coyote Creek Trail & Park, including Olinder School baseball field, begin to flood.	22 to 23	25 to 26	28 to 29			
4e	NE of 12th & Keyes Streets	Car ports-located on the first floor of two-story apartment buildings- begin to flood	14 to 15	16 to 17	17 to 18			
4f	Olinder Neighborhood and School	Selma park fills and overflows to the northeast, flooding streets, the school, and homes. Water does not return to creek and flows northeasterly through streets.	26 to 27	29 to 30	31 to 32			
4g	Area northwest of E. William St.	E. William St. overtops on the west side of Coyote Creek, flooding homes, backyards, and streets.	27 to 28	30 to 31	32 to 33			

ID#	Index Location	Flooding Description	FLOOD THREAT STAGE AT MONITORING LOCATION				MONITORING LOCATIONS	PHOTO
			50% Capacity	70% Capacity	100% Capacity	2017 Flood High Water Mark		
5a	Happy Hollow Zoo	Low lying areas, including animal enclosures begin to flood.	13 to 14	15 to 16	17 to 18	20.6	Rocksprings Stable Drive	
5b	Kelley Park	Park begins to flood.	14 to 15	16 to 17	17 to 18			
5c	Rocksprings Neighborhood	Homes and streets begin to flood.	15 to 16	17 to 18	18 to 19			

Table 3A: Madrone Gauge Flood Severity Thresholds (NWS model)

Madrone Gauge Thresholds	Stage (ft)	Description
Action	6	Low flow crossings across Coyote Creek will be inundated.
Minor Flooding	7	Flooding to low lying businesses northwest of Berryessa Road and Coyote Creek.
Minor Flooding	8	Horse Ranch opposite the Rock Springs Neighborhood at risk of flooding. Watson Park and Coyote Creek Trail at Selma Park begins to flood. Homes in the creek along Arroyo Way and 17th Street northwest of East William Street begin to flood. Flooding to businesses northwest of Berryessa Road and Coyote Creek.
Moderate Flooding	9	Apartments that back onto Coyote Creek at the intersection of Keyes Street and South 12th Street begin to flood lower level garages. Watson and Selma Parks flooding. Homes along Arroyo Way and 17th Streets, and homes northwest of William Street and the creek flood. Flooding beings at Williams Street Park, Happy Hollow Zoo and Kelley Park. Berryessa Road is at risk of localized street flooding, with business northwest of Berryessa Road and Coyote Creek flooding.

Madrone Gauge Thresholds	Stage (ft)	Description
Moderate Flooding	10	Sycamore Avenue accessing the Boys Ranch Detention Facility at risk of inundation. Low areas in Happy Hollow Zoo affecting structures and animals flood. Rock Springs Neighborhood at risk of flooding. Apartments that back onto Coyote Creek at the intersection of Keyes Street and South 12th Street at risk. Homes located near the creek along Arroyo Way and 17th Street, Brookwood Avenue, S 16th Street and East William Street, 19th Street between San Antonio and Calhoun are at risk. Olinder school begins to flood. Watson, Selma, Kelley, and William Street Parks are flooding. Low areas of Roosevelt Park are flooded. Woodborough Drive starts to become inundated. A few homes located in the RV storage lot south of Maybury Drive may flood. Business northwest and southwest of Berryessa Road and Coyote Creek flood.
Major Flooding	11	Sycamore Avenue accessing the Boys Ranch Detention Facility flooded. Rock Springs Neighborhood, Kelly Park, and Happy Hollow Zoo flooding. Apartment buildings at Keyes Street and South 12th Street possibly flooded. Homes along Arroyo Way and 17th Street, homes north of William Street on South 16th Street and East William, homes along Brookwood Avenue, and 19th Streets are at flood risk. Selma Park inundated and overflows into Olinder Neighborhood. Minor flooding at Olinder School. William Street Park is inundated. Watson Park inundated and begins to flood Monfernio Drive. RV Storage lot north of US-101 flooded. Flooding in the offices and industrial areas north and south of Berryessa Road west of the creek. The floodwall on the south side of Golden Wheel and South Bay Mobile Home Parks begin to overtop.

Madrone Gauge Thresholds	Stage (ft)	Description
Major Flooding	12	Sycamore Avenue accessing the Boys Ranch Detention Facility flooded, and adjacent Malaguerra Avenue intersections inundated. Flooding to the Rock Springs Neighborhood, Kelley Park, and Happy Hollow Zoo. Apartments that back onto Coyote Creek at the intersection of Keyes Street and South 12th Street flooded at lower levels. Flooding in the Olinder Neighborhood, to houses located along Arroyo Way and 17th Street. Selma Park and William Street Park flooded. Moderate flooding to homes north of East William Street west of the Creek and to Olinder School. Minor flooding occurs at the neighborhood on Monfernio Drive located west of Watson Park, with the park being flooded. Mobile homes located in the RV storage lot north of US-101 flood. Flooding to commercial businesses north and south of Berryessa Road on the west side of the Creek. Flooding in the Golden Wheel and South Bay Mobile Home Parks. Minor street flooding occurs at Charcot Ave due to bridge overtop.
Historical High Water	12.06'	February 2017
Major Flooding	13	Hellyer Park has significant flooding. Major flooding in the Rock Springs Neighborhood and adjacent horse ranch. Happy Hollow Zoo and Kelley Park flooded. Lower levels of apartment buildings at Keyes and 12th Street are flooded. East William/Olinder Neighborhood (South 22nd Street, South 21st Street, Brookwood Avenue and 19th, 20th, and 21st Street) flood with flows moving northeast towards US-101 and Lower Silver Creek Ponding of concern on the Southside of Lower Silver Creek at West Court and Anne Darling Elementary School, South 16th Street and East William near the Creek, Brookwood Avenue, Arroyo Way and South 17th Street, and Gilthero Court. Flooding for Olinder Elementary School, and San José Community Middle and High Schools. East Taylor Street and Kellogg Plant on Eggo Way flooding. RV storage park north of US-101 flooding. US-101 flooding near Mabury Road. Commercial and industrial area near Berryessa Road are significantly flooded. Major flooding in the Mobile Home Parks.

Madrone Gauge Thresholds	Stage (ft)	Description
		Spill at Charcot Avenue Bridge escapes to the east of Charcot Avenue Bridge toward I-880 and CA-237, and escapes to the west toward Montage Expressway and North 1st Street.
Major Flooding	14	Disastrous flooding occurs along Coyote Creek downstream of Tully to the San Francisco Bay. Rock Springs Neighborhood and adjacent horse ranch inundated. Apartment buildings at the intersection of Keyes Street and S. 12th Street flooded. Happy Hollow Zoo and Kelley Park flooded. Spills from Selma Park flow northerly to flood a large area east of the creek, continuing northward to Upper Penitencia Creek, overflowing Hwy 101. West bank outbreaks at Watson Park, N 20th Street, Roosevelt Street, N. 19th Street at its southern end, N 18th Street, East St. John Street, East Santa Clara Street and S. 17th Street The neighborhood located northwest of Watson Park may be flooded. Floodwaters converge to the Commercial Street Neighborhood around N. 4th Street and N. 10th Street to cause flooding north of I-880 in San José, California. Businesses north and south of Berryessa Road and west of the creek are inundated. The South Bay and Golden Wheel Mobile home parks are inundated; there is risk that floodwaters could overtop and flood homes to the west. Charcot Bridge overtopping on both right and left banks flowing away from the Creek flooding an area

Madrone Gauge Thresholds	Stage (ft)	Description
		roughly between Coyote Creek and Guadalupe River, and between Montague Expressway to CA-237. Japantown, Hyde Park, and Northside San José are possible flooded.

Disclaimer: The flooding thresholds in this table are based on hydraulic modeling results calibrated with data collected during the February 2017 flood event. Hydraulic modeling results are estimates. Information is accurate within the model limitations and assumptions/data used for model development. Use care while interpreting results.